

THE DENTAL DIGEST

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EDITED BY

GEORGE WOOD CLAPP, D.D.S.

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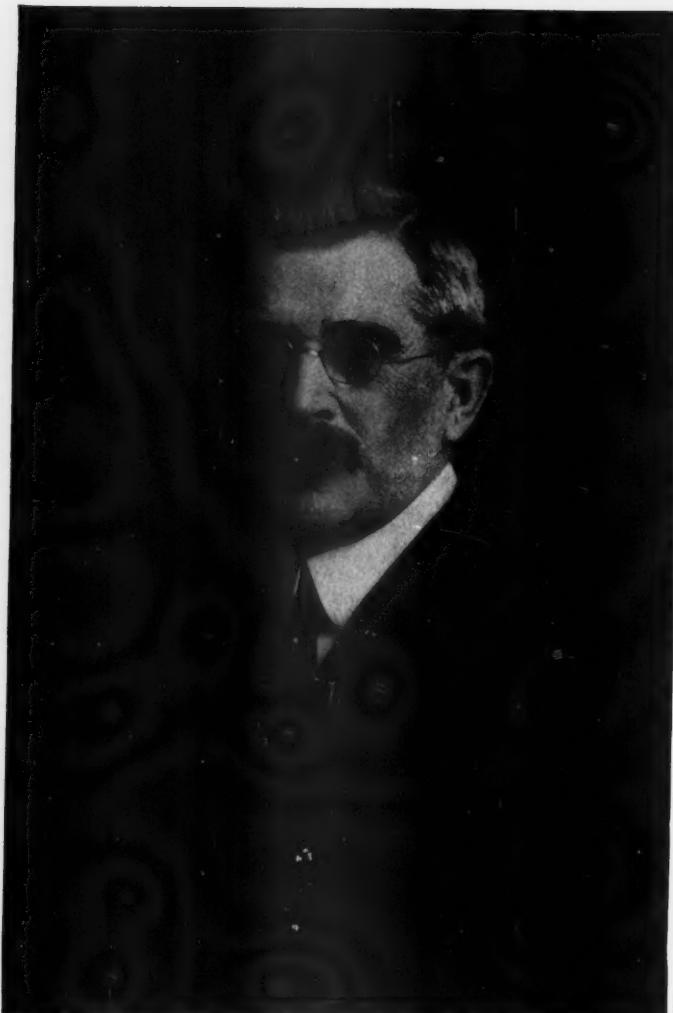
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March







Jacob Frick Frantz, M. D.

1852—1914

DR. JACOB FRICK FRANTZ, President of The Dentists' Supply Company, died on February 7th after an interesting and eventful career.

Dr. Frantz was born in Lancaster County, Pennsylvania, July 29, 1852. He was educated at the Millersville State Normal School and the Hahnemann Medical College, from which latter institution he was graduated in 1876.

Immediately after his graduation Dr. Frantz entered upon the practice of medicine and in the prosecution of his professional duties came into contact with certain persons who were engaged in the manufacture of porcelain teeth. The possibilities of development of this infant industry appealed to him, and he was drawn more and more into connection with it until, in 1879, he organized The Wilmington Dental Manufacturing Company. In 1895 Dr. Frantz moved to New York and became President of The Consolidated Dental Manufacturing Company, a position which he held until 1899, when he became President of The Dentists' Supply Company.

In the fifteen years since The Dentists' Supply Company was organized, it has risen to recognized leadership in its field. Its products are used in every quarter of the globe and many improved methods which it has either originated or aided in presenting to the dental profession are now matters of routine practice with a large portion of the profession.

In the organization and development of this company, Dr. Frantz found expression for his genius in selecting and developing men. He set before them visions of achievement and inspired them with determination and courage to transform those visions into facts.

Dr. Frantz endeared himself to a host of friends by a rare combination of lovable qualities, of which perhaps the most prominent was his quick and intelligent sympathy and his readiness to lend aid, often at personal inconvenience to himself. He had that rarest of all gifts, the ability to put himself in the other person's place, and he applied to the solution of whatever trouble presented, his powerful imagination, his clear vision, his great business ability and his power to interest others. Each of his associates and employees feels that Dr. Frantz was his personal friend, and each feels the loss not only of the inspiring leader, but of one to whom he could turn for interest and sympathy.

Dr. Frantz not only made for himself an enviable place in the activities of his chosen commercial field, but his abounding vitality overflowed into many activities for the good of his home community, New Rochelle, N. Y. Some of his more prominent activities were as follows:

Director, National City Bank, New Rochelle; Trustee, People's Bank for Savings; Trustee, First Presbyterian Church; Trustee, Young Men's Christian Association; Trustee, Home for the Aged; President, Beechwood Cemetery Association.

He was a member of numerous organizations, as follows:

Republican Club, New York; Pennsylvania Society of New York; Republican Club, New Rochelle; City Club, New Rochelle; New Rochelle Yacht Club; Wykagyl Country Club; Huguenot Society.

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Send Pictures for the June Number

Pretty soon after you get this number of the magazine there will come an occasional day when you will take an extra sniff of the morning air and say "It smells like spring today." And if you are anything like me, your fancy will run on from that point to the good old summer time, with the long days and the prospect of vacation.

Some of you who need vacations most will not take them. You cannot be persuaded that if you go away for a little while the profit will be greater than the loss. You do not realize that the years are slipping away and that each of them is taking from you something you will never get back.

Some of you cannot realize that you are losing ground physically and that you owe it to yourself to take a time for rest and for rebuilding the body you are daily tearing down. But each year some dentist writes in that the Vacation Number of *THE DIGEST* persuaded him to take a vacation, and that whereas he had intended to stay home, he packed up the wife and kiddies and went far or near and really lived. He nearly always writes that the family had a fine time, got acquainted again, and that he intends to do it every year.

If there's anything in the theory of "taking a thief to catch a thief," I ought to be able to prepare a Vacation Number that would take all you needy ones out of your offices and keep you out till you were strong again. I've pretty nearly worked myself sick this winter. Following the Gysi courses in New York I lost my vacation through sickness at home. Then came the work on the premium book which will go to you soon; and at the same time the labors incident to the book which Dr. Williams, Prof. Gysi and I are to offer this spring, and the preparations for the presentation of the teeth on which we have been working so long.

These labors will be largely over by summer time and I'm looking forward to vacation time as a prisoner looks toward the day of his release. Why, only last night I had to go down to the Motor Boat Show here in New York and look over a lot of boats because they are the nearest to anything that looks like vacation that I can reach now.

I've got a fine camping outfit and a car to take the family to the spot. There is a good beach, a big lake, a dandy little motor boat, a few fish that want to be hooked, and a chance to hang a hammock in the shade and loaf. I wish it was time now.

I'd like to get up a Vacation Number this time that would make you all feel just as I do when I write this. I cannot do it unless you help, and unless you help in time. Will you send me in your pictures and stories or letters EARLY so that I shall not have to drive so at the last to get them ready?

And then for one issue we'll forget root canals and bridges and dentures and articulation and fussy patients and backaches, and get ourselves in the humor to enjoy some of God's good things before the time comes when the grass covers us and those we love and who love us can no longer share with us the sane and simple pleasures of life.

GEORGE WOOD CLAPP.

"I have never yet found a preparation for the teeth and gums so efficient, so convenient, so pleasant as your Ribbon Dental Cream."

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THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., Editor

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No. 3

THE TEMPERAMENTAL SELECTION OF ARTIFICIAL TEETH, A FALLACY*

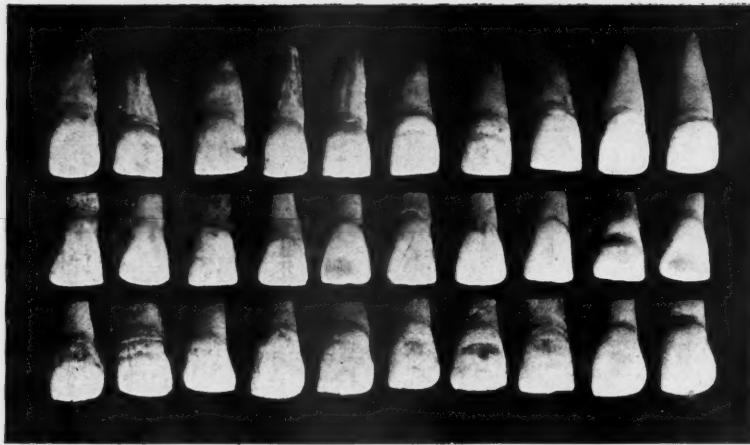
BY J. LEON WILLIAMS, D.D.S., L.D.S., LONDON, ENGLAND,

Fellow of the Royal Anthropological Institute of Great Britain and Ireland.

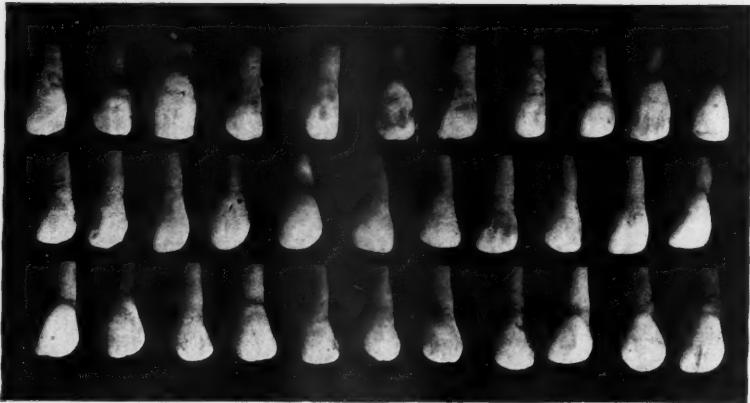
(*Second Paper.*)

LET us now examine in detail the proofs of the statements that nature produced three typal forms of teeth in all races and modelled all teeth upon these three. You have on the screen a photograph representing a small but representative selection of the three primary forms or types of human teeth. In all reference to them they will be designated as Class I, II, and III. Class I is characterized by the parallel or nearly parallel lines which represent the proximal surfaces of these teeth for half or more than half of their length from their incisal edges. In Class II these lines converge so markedly that they would meet, in most instances, at a point near the end of the root. These converging lines are sometimes nearly straight, but usually there is a very slight convexity of the mesial proximal surface and a slight concavity of the distal surface. Class III, which I regard as the most beautiful form of human teeth, and which has rarely if ever before been used as a model for artificial teeth, is characterized by a delicate double-curved line on its distal proximal surface, and sometimes, though less frequently, on the mesial surface. All of the surfaces and angles of teeth of this class are more rounded and graceful than in either of the other two classes.

* Read before The First District Dental Society, New York, December 8, 1913.



Class I.



Class II.



Class III.
Three primary forms or types of human teeth.

The specimens shown in this photograph represent the most severe or typal shapes of what I call the primitive forms of human teeth. My reason for the use of the word "primitive" will appear later. All of the other teeth in any given set partake of the features of the central incisors, but to a much less marked degree. But in this respect the natural teeth of a given set are not always in harmony. The crossing of races or some other cause often disturbs the perfect harmony of line of the different teeth in a set, and you may sometimes find centrals of one class and laterals and canines of another. But usually the harmony is more or less perfectly preserved. In designing artificial teeth we can, of course, **always** maintain a proper harmony throughout and thus improve on nature. The illustrations on page 126 will show you laterals, and canines arranged in the order of the three classes.



Illustration No. 8.—Group from the Sandwich Islands.

We will now pass to an examination of the teeth of some of the more important civilized and savage races of ancient and modern times, in which I shall show you that the three types or classes of teeth I have illustrated and described are to be seen in the skulls of all these otherwise widely divergent peoples.

We will begin with 3 skulls from a savage race of to-day—the Sandwich Islanders.

The shape of the skulls differ markedly, but this difference in skull shape has no necessary relation to the different forms of teeth. We have here the three primary forms of human teeth very clearly shown. We have the square tooth with parallel sides in skull No. 1, the pyramidal shaped tooth with its converging lines in No. 2, and

an ideal specimen of Class III with its beautiful curves in skull No. 3.

As you would expect, not all of the teeth in the different groups of skulls which I shall exhibit are such perfect examples of the severer



Illustration No. 9.—Three Javanese skulls.

forms of the three classes. Probably perfect examples could always be found if one had a sufficiently large number of skulls at command. The surprising thing is that even in a small collection of skulls, often less than a dozen, I have always been able to find fairly good repre-



Illustration No. 10.—Three Chinese skulls.

sentatives of the three classes, but I believe that the more severe typal forms are more frequently found in those races in which there has been the least crossing.

The next view is of three Javanese skulls.¹ Here the centrals in Class III have been slightly modified toward the oval form: Class II, page 128, is well represented by the pyramidal shaped teeth in skull No. 2, and No. 1 shows a very good example of Class I.



Illustration No. 11.—Two skulls of the modern German.

Illus. No. 10 shows three skulls from another ancient civilized race—the Chinese. No. 1 shows a slightly modified form of the typal tooth,



Illustration No. 12.—Three modern Greek skulls.

but Nos. 2 and 3 are excellent representatives of their respective classes. (See page 128.)

Illus. No. 11 shows two skulls of the modern German. I was

¹I do not think that these skulls represent the true aboriginal natives of Java. They are probably those of a mixed race.

unable, in the small collection of skulls at my command, to find a good example of No. 3 in this series. It should be said that the photographs, in many instances, do not show the characteristics of the



Illustration No. 13.—Modern Hindoos.

different forms of teeth as clearly as they would be seen in handling the skulls. (See Illustration No. 11.)

Three modern Greek skulls are shown in Illus. 12—Nos. 1 and 2 very good examples of their class, No. 3 somewhat modified in the direction of No. 2. (See page 129.)



Illustration No. 14.—Patagonian skulls.

Illus. No. 13 are skulls of modern Hindus—all excellent specimens of their respective types.

In Illus. No. 14 we have three strongly marked forms of Patagonian teeth—No. 1 very slightly modified toward the oval shape, No. 2 typical and No. 3 an interesting modification in which the line of double curve appears on both mesial and distal surface.



Illustration No. 15.—A group from the New Hebrides.

A group from the New Hebrides—Nos. 2 and 3 are perfect example of their classes, while No. 1 is slightly modified in the direction of Class III. Notice the wide divergence in shape of these skulls, and observe also that the largest teeth are in the smallest skull.



Illustration No. 16.—Three French skulls.

French skulls. Classes II and III well represented. Class I shows a coarse modification of the typal form.

These three from the west coast of Africa—all fine characteristic examples, although No. 3 is somewhat marred by the filing of the centrals.



Illustration No. 17.—Skulls from West Coast of Africa.

Three specimens from Italy. Nos. 1 and 3 typical. No. 2 modified. Here, again, the smaller teeth are in the larger skull.



Illustration No. 18.—Italian skulls.

The next group of skulls is, in some ways, the most interesting in the entire collection shown you to-night. The natives of Australia, Tasmania and New South Wales represent the lowest type of human beings of modern times. The skulls of these savages have many points of resemblance to the anthropoid apes. Here, if anywhere, you might

expect to find a racial form of tooth. But just observe the difference in the shape of these skulls and teeth. With the exception of the teeth of the ancient Egyptians, these low Australian savages exhibit the characteristics of the three primitive forms or types of teeth more clearly than any others in the groups I have shown.



Illustration No. 19.—Tasmanians.

The skull on the left in the above illustration contains the largest teeth I have ever measured. Although the skull on the right is a little larger than the one on the left, the teeth are much smaller.



Illustration No. 20.—Ancient Egyptians.

The last group in this series that I shall show you is from that very interesting ancient race, the Egyptians of the III and IV Dynasties—a period dating more than 2,000 years before Moses led the

children of Israel out of Egypt. We are back in the Bronze Age, at the dawn of what we call Civilization, the time of the Troy of the Iliad and before the Great Pyramid was built. It was a piece of great good fortune to have found three such perfect skulls from this far distant era, showing so perfectly the three primary types of teeth. They are each ideal specimens of their class. The teeth in skull No. 1 answer perfectly to the description given in our text books of the sanguine type of tooth, but I believe all authorities are agreed that those ancient Egyptians did not have light hair or blue eyes or a ruddy, light skin. There is evidently a mistake somewhere—perhaps it is the fault of the Egyptians. But the forms of teeth shown in the other two skulls have never been observed by any advocate of the temperamental theory of classification. New temperaments will have to be invented for them.

Suppose the teeth in all three of these skulls had been, as might easily have happened, of type I, a strong tooth full of character. Would it not have been said that here was the typical racial tooth form of the ancient Egyptian?

This mistake concerning racial types of teeth has doubtless grown out of insufficient critical observation.

(This article is expected to be continued in the April number.)

BLEEDERS AND WHAT TO DO FOR THEM*

By R. R. JOHNSON, D.D.S., GREAT FALLS, MONT.

The title of my paper may be a little misleading as that is a broad subject and impossible to fully consider in a short paper. It may, too, sound a little hackneyed, because it appears as if the editors of our journals, when they need something to fill in an inch or two on a column, will give some advice concerning the control of hemorrhage; some of this advice, if followed, might give the poor patient just grounds for a suit of malpractice.

I shall endeavor to present to you a few ideas that I know from personal experience to be practical, and if I can add but one thought to your knowledge of this subject, this paper will not have been written in vain.

* Read at Butte, Mont., June 10, 1913.

Many of us thoughtlessly, in speaking of some case where the hemorrhage has been profuse, refer to the patient as being a "bleeder;" this term means a hemophiliac and the chances are that they are not. The definition of bleeder is "An hereditary and congenital disease characterized by a tendency to frequent, obstinate and prolonged hemorrhage, external or internal, spontaneous or traumatic, associated with swelling of the joints."

Our knowledge of this disease is modern. It was left for American physicians accurately to define its characteristics—Otto Smith, Hay and Buel Brothers in the early part of the last century, and Hughes, Harris, Hutchinson (a dentist). Holton & Dunn, in the past forty years have been the chief contributors to the literature on hemophilia. The early writers first demonstrated its hereditary nature. Otto gave the name "Bleeder" to an individual patient.

Sex and heredity are the most potent factors in the etiology of hemophilia. It occurs with greatest frequency in the male, the ratio being put as high as eleven males to one female. Females do not usually present typical cases and danger to life is less in this sex. Nearly all cases may be traced to hereditary origin. It has been suggested that this tendency to hemorrhage is the result of the intermarriage of near relatives. The fact that it occurs largely among Germans and Jews favors this view. While the females are not the bleeders of a hemophilic family, the disposition is transmitted through them. The mother, not a bleeder, will transmit the tendency to her sons. They, in turn, are not likely to conduct the disease to their children, but the tendency passes through the daughters to the grandson; the cases are very rare when the father, a bleeder, will pass down the tendency to either his sons or daughters; a male non-bleeder in a hemophilic family seldom transmits the tendency to his descendants. The tendency to bleed may continue through many generations. By some it is thought to be a disease peculiar to the Anglo-German races. Of 212 families, 94 were German, 52 Great Britain, 23 North American—Johns Hopkins Hospital reports one negro; spontaneous hemorrhage rarely occurs after the twenty-second year; traumatic hemorrhages due to cuts, blows, scratches, etc., even after the most trivial operation, may prove fatal. Internal hemorrhage and joint affections are common to these families. The blood is usually apparently normal, but after prolonged hemorrhages, or many little hemorrhages, it partakes of the nature of the blood of anæmia, while corpuscles in excess, the red in smaller numbers, the filarie apparently not greatly reduced, but there is a decreased co-agulability of the blood. The pathology is obscure, nothing definite is really known.

So much for the "Bleeder," and enough, I believe, to constitute him a small part in the number of cases of the severe hemorrhages with which we meet.

In considering the treatment of hemorrhage it is well to first consider some of the causes.

Traumatic causes: Any violence to the continuity of the tissues will cause more or less hemorrhage. Incised wounds bleed more freely than lacerated or contused wounds. Remember this when freeing the gums about the roots of a tooth you intend to extract. Use a dull lance and cut the peridental membrane, prying or dissecting the gum free.

Pathological causes: Mentioning only a few such as malignant neoplasms causing a rupture of blood vessels by sloughing—erosion, abscesses, rupturing, etc. The systemic pathological causes other than hemophilia which predispose to hemorrhage are anæmia, syphilis, purpura, tuberculosis, etc., which alter the condition of the blood vessel walls or change the character of the blood. Anything which tends to lessen the number of red corpuscles and hemoglobin retards blood clotting. The condition known as arterial sclerosis (hardening of the arteries) is one that it is not desirable to meet with. Specific and special diseases should be referred to competent medical practitioners.

Treatment: The first requisite, I believe, is to keep yourself well in hand. A calm, self-possessed appearance or actions inspires confidence in the patient and will help to lessen his excitement, and consequently, increased heart action and blood pressure. In the case of hemorrhage from the jaw, the volume of blood lost appears to be greater by reason of the saliva mixed with it.

A condition frequently associated with or following excessive hemorrhage, and which requires special attention and treatment, is shock, and perhaps it is well to consider this for a moment at this time. The symptoms of shock are about the same as those of internal hemorrhage. Low temperature, weak, compressible pulse, great pallor, cold skin and extremities, profuse perspiration, lack of depth of respiration, sometimes nausea and vomiting, especially on returning to normal. If temperature falls to 96 degrees the patient is in danger.

Treatment of Shock: Recline with head lower than body. Cold water on the face and head. A hypodermic injection of strychnine or digitalis or give 30 drops of aromatic spirits of ammonia in a swallow of water, a glass of whiskey. Amyl nitrate pearls or ammonia to the nostrils, heat over the chest, mustard to the feet, and rest in bed constitute the accepted treatment. Venous and capillary hemorrhages are usually easily controlled by hot water, preferably hot bichloride solution or a hot sterile compress.

In primary hemorrhage no operation should be performed upon the artery unless it is at the moment actually bleeding. In applying a ligature to an artery, cut down directly upon it at a point from which it bleeds and secure it in the wound. Two ligatures should be applied, if the artery is completely severed, one on each side of the wound.

Hemorrhage from the gums may be due to general pathological condition. I saw one case of vicarious menstruation from the gums; or it may be due to malignant neoplasms, as before mentioned, but it is usually caused by an accumulation of scale, rough margins of fillings or poorly fitted prosthetic appliances, causing a local hyperemia, congestion or tumefaction.

The treatment is to remove the exciting cause by a thorough scaling or removal of the mechanical irritants. Syringe out all pockets, massage the gums well with the fingers, apply iodine or glycerine and iodine to which has been added some zinc. Prescribe an astringent mouth wash—Liquor Antisepticus, U. S. Ph., with 10 grains zinc sulphocarbolate to the ounce, to be diluted with 6 to 8 parts of sterile water. Instruct patient to massage the gums thoroughly every day and use the wash frequently.

Hemorrhage from a root canal, if persistent, is at least annoying. I do not believe in trying to stop this too soon, especially if pressure anesthesia has been induced in the pulp. The hemorrhage relieves the congestion about the apex and serves to mechanically remove any possible infection. But now we wish to fill this root and cannot get it dry. I find that hot sterile water and a small syringe generally bring about the results sought. Failing this, a dressing of trichloracetic acid, four per cent., placed in the canal for five minutes always stops the hemorrhage. The canal is then cleared of coagulated blood with alcohol and the root filled in the accepted manner. If you have the time, place a mild non-irritating dressing in the canal for a day or so.

Hemorrhage from the jaws, following tooth extraction or evacuation of an abscess, is what sometimes makes you wish you were on some other job. The primary hemorrhage, though at times somewhat profuse, is generally a good thing. The tissues may have been badly congested and the hemorrhage serves to clean things up. I do not believe in making it a routine practice to wash out the sockets or pack them unless there is some special reason for so doing. It only retards nature's method of repair by delaying the formation of a clot and invites infection. Of course, I have no objection to the use of a non-irritating antiseptic mouth wash.

It is the secondary hemorrhage, when it occurs, that requires attention. This generally begins several hours later, and you are called by

'phone or messenger with the added information that the patient has lost over a gallon of blood and is surely bleeding to death.

The first thing to do is to wash out the mouth thoroughly, so as to make a careful examination. Look for and locate the bleeding point or points, examine carefully for any loose or small bit of bone or process which may by its sharp edge be keeping some small artery from collapsing. Compress the margins of the process with thumb and fingers, using considerable force. I have on two occasions passed a heavy ligature through the lingual and buccal or labial walls, going deep with a curved needle in the region of the bleeding point, bringing the ends together and tying firmly, with good results. If you could only catch up the severed artery and give it a good squeeze or a twist with artery forceps all would be well. But it lies buried deep in the alveolus and you cannot reach it. Hemorrhage has been controlled by cutting down and exposing the carotid artery, being careful not to injure it or the nerve which accompanies it. Dissect it free and pass a sterile tape about it. The flow of blood can then be retarded as much as desired and thus give a chance for clotting. This is the method frequently employed by surgeons in extensive operations on the jaws, an attendant holding the tape.

Well, our case is still bleeding. You have packed the sockets with various astringent preparations on cotton or gauze; perhaps replanted the tooth, but the hemorrhage does not cease. It might be permissible at this time to relate a few cases from actual practice. One case in his early years of practice was related to me by Dr. Chase. It was a stubborn case of secondary hemorrhage that had resisted all his efforts to check. He could think of nothing more to do and had sent for an M.D. While anxiously awaiting his arrival he noticed some ice in the rain barrel. This solved the problem. He packed the patient's mouth with crushed ice. It froze his cheeks and gums pretty badly, but it saved his life. So don't forget cold compresses as a possible remedy when your turn comes.

The following cases may be of interest.

(This article is expected to be concluded in the April number.)

INSTRUMENTS FOR INSERTING SILICATE CEMENT FILLINGS.—By burring a hole into the end of a broken excavator and cementing into it a piece of celluloid, a serviceable instrument for inserting silicate cement fillings can be made. The celluloid can be filed to any desired shape.—*Deutsche Zahnaerztliche Zeitung*.—*The Dental Cosmos*.

THE PRINCIPLES AND PRACTICE OF TOOTH EXTRACTION

By WILLIAM J. LEDERER, D.D.S., NEW YORK CITY

*Sixth Paper**

THE REMOVAL OF UNERUPTED TEETH

UNERUPTED teeth are such, covered by soft or hard tissue or both. If a tooth has perforated the alveolus and is only covered by gum, a fact easily ascertained by the probe, it is a simple matter to remove the overlying tissue with knife, anatomical forceps and curved shears. The simplest method to remove such gum tissue is, after painting the part with Tr. Iodine, to make a flap, loosen it with a periosteal elevator, grasp it with anatomical forceps and then cut off the flap with curved shears or a stroke of the knife (See Fig. 45).

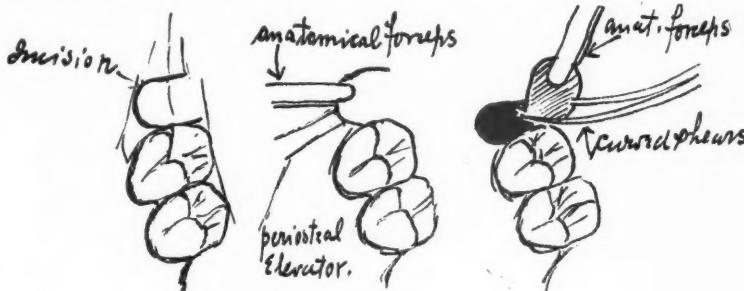


FIG. 45

To reach a tooth that is covered with bone is more difficult as the overlying osseous tissue must be removed. The deeper the tooth is buried in bone, the more difficult the operation. A procedure of this kind should never be attempted without a radiograph, which determines the exact position of the tooth, and its relation to surrounding structures, as the inferior dental canal and mental foramen in the mandible and the antrum of Highmore and nasal cavity in the upper jaw. It helps to gauge the severity of the operation, its probable length of time and possible complications. A lower third molar may be lodged so near the inferior border of the mandible that it may prove a much easier operation to make an external incision well under the border of the jaw, than to attempt to remove the tooth intrabuccally. This is a rare occurrence but it may happen. The writer always insists upon an X-ray before operating.

The steps for removal of an unerupted tooth (buried in bone) which operation can be termed "Odontectomy" (cutting out a tooth), are:

* These papers were commenced in the May, 1913, DIGEST.

1. Sterilization of field of operation.
 - a. Thoroughly brushing teeth and washing the mouth.
 - c. Painting the part to be opened with Tr. Iodine.
2. Introduction of anæsthesia (conductive).
3. Retraction or removal of overlying soft tissues.
4. Removal of bone covering the tooth with burs, chisels or bone forceps.
5. Removal of tooth.
6. Washing of wound with boric acid solution to remove spiculae of bone.
7. Packing or closing of wound.

The method of procedure on the whole is the same as followed for the removal of impacted teeth, excepting that in freeing a tooth completely embedded in bone, more osseous tissue must be removed.

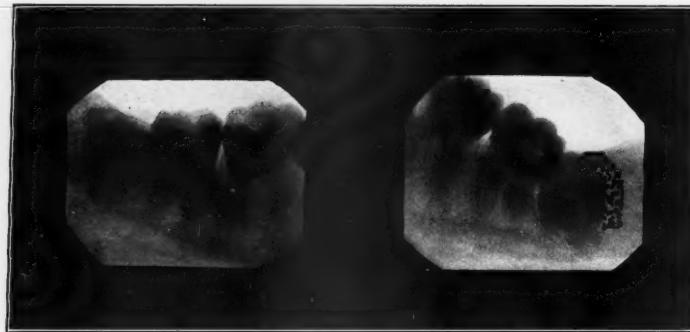


FIG. 46

Some teeth are covered by a thin shell of bone which is easily removed with a bur as the case shown in Figure 46, where after dissecting the gum away, flap fashion, the overlying bone was removed with a fissure bur and a groove cut posterior to the tooth, as indicated by dotted lines. The operator was then able to lift the tooth out of its socket quite readily. (Fig. 46).

In other cases the procedure is more complicated. Fig. 47 shows a supernumerary tooth between 2 upper centrals, one of which was rotated due to the presence of the supernumerary. In this case two incisions a. b. and c. d. were made, these joined by a third, b. d., and the flap loosened and retracted, 47c. The shaded portion bone F. was removed with a fine rongeur and burs till the lower portion of the tooth s. t. could be grasped with narrow forceps and removed.

The wound was washed out with boric acid solution, a little iodoform powder was blown into the cavity, the gum flap returned to its original position and tacked down with a single silk suture. After 5 days this was removed and there was no trace of any operation. The two centrals were not disturbed.

After the cavity will be completely filled with osseous tissue, orthodontic treatment will be resorted to, to bring the rotated central into normal position. (Fig. 47).

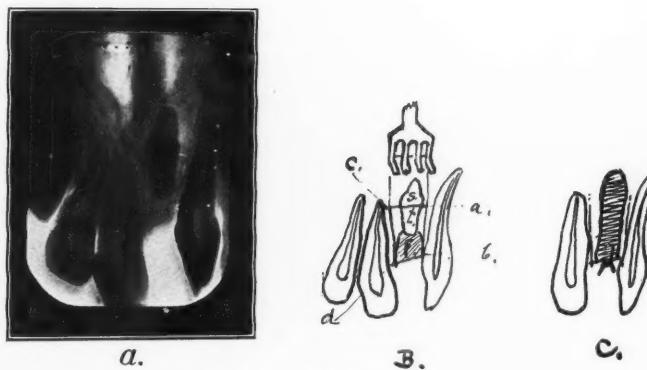


FIG. 47

Figure 48 illustrates one of the most interesting and rare cases the writer has met with in his experience. The patient was a young woman who had suffered from neuralgia and had developed a swollen face producing trismus. She consulted a dentist who referred her to a physician, who advised hot poultices and gave sedatives and coal tar preparations to allay her pain. After suffering ten days and consulting several dentists and physicians the writer was asked to see the patient, with one of the medical men. The patient at that time was exhausted and near collapse. Her face was swollen, there was trismus, she had a temperature of 103 with a rapid irregular pulse, 120. Fractured tooth, necrosis of jaw, beginning erysipelas were the varying diagnosis. There was no fluctuation discernable on the face. She could not open her mouth but the buccal tissues in the lower molar region were swollen and hard as a brick. The writer after administering an anæsthetic made sweeping exploratory incisions along the lower jaw where the swelling was found but could not reach any pus.

The patient was given opiates and an immediate X-ray demanded which cleared up the diagnosis. An erupted lower molar had produced an odontoma. The dark mass occupying the whole molar region

and reaching almost from the border up to the gingiva proved a tooth-substance tumor, odontoma. The patient was removed to the hospital, and tumor and tooth removed.

The operation was one of the severest the writer ever had occasion to attend and lasted nearly 3 hours. One of the dangers attending was the fracture of the mandible which showed but a very thin strip of healthy bone at the lower border, but good fortune attended the case and the tumor plus tooth was shelled out without injury to the jaw. The patient made a complete recovery and a radiograph taken subsequently showed a gradual regeneration of the jaw. There are very few cases of odontoma on record. If the molar tooth were situated so low in the jaw and there was no other complication present, if it had to be removed, the removal of the tooth could be accomplished, by dissecting the cheek



FIG. 48.—The arrow points to unerupted third molar.

away from the mandible and burring and chiseling away the facial wall. In doing this the facial artery would very likely be cut and would have to be ligated, or an external incision below and behind the inferior border of the jaw might accomplish the desired end easier. If the incision is made properly, a scar will not be visible. (Fig. 48).

Fig. 49 shows an unerupted lower permanent canine tooth. The radiograph was taken because the patient still has a perfectly tight temporary canine tooth *in situ* and being referred to the writer for an opinion whether or not this "baby tooth" should be removed, particularly as she wanted a bridge put into the space shown. The author advised a radiograph, and the retention of the temporary teeth, as it has its root

completely. Were it necessary to ever remove the unerupted tooth, the author would dissect the soft tissue from the mandible, and "open" the jaw from its facial aspect.

Unerupted teeth demanding operation, in the writer's experience, occur in frequency as follows: most often in

1. Molars, mostly third and more frequently in the lower than in the upper jaw.
2. Cuspids
3. Supernumeraries
4. Incisors
5. Bicuspid

} More often in the upper than the lower jaw.



FIG. 49

A good deal more could be written about the removal of unerupted teeth, many more cases could be cited, but it would spell repetition of previously mentioned matter. The most important features are:

1. The correct diagnosis, which can in all cases be made by means of the radiograph.
2. The skillful removal of the tooth.

This means in all cases the dissection of soft tissues and the removal of bone until the tooth is reached. There is no fixed rule how to obtain this end; the writer has attempted by showing practical cases, to illustrate the general principles.

What must be borne in mind are: Asepsis, and nicety of procedure, by that I mean exactness of our execution. In other words do not hurry, think while you work; speed will come by itself.

Another point to be borne in mind is never to attempt to operate in the dark, don't feel your way along, see what you are doing. Dissect away as much tissue as possible, remove bone incarcerating tooth or root. An aseptic operation guarantees healing by primary union, or granulation. Do not spare iodine, the knife or chisel. It is better to cut a little more tissue away and proceed, than to do damage, cause infection and let the general surgeon do a radical operation for periostitis or osteomyelitis.

150 East Seventy-fourth Street.

(This article is expected to be continued in the May number.)

A COURSE IN PROF. GYSI'S METHODS IN ARTICULATION

(TO BE GIVEN IN SEATTLE BY DR. F. W. HERGERT)

AMONG those who attended Professor Gysi's classes in New York was Dr. F. W. Hergert, who came all the way from Seattle for that purpose. Dr. Hergert was especially well qualified to get the best of what Professor Gysi had to offer, and certainly made the most of his opportunities. Dr. Hergert and Dr. Engstrom, with a few others, were Professor Gysi's almost constant companions not only during the class hours but in the hours when greater opportunities for personal intercourse existed. All these men gained quite as much in this way as they did in the class.

I understand that Dr. Hergert had it in mind to give this course when he came East, it being his desire to give those whom he referred to as "the boys at home" the advantages which he was enjoying.

More and more, as I see Professor Gysi's methods applied and the increased comfort and efficiency they impart to dentures and bridges, I remember a phrase of Dr. Hergert's, to which he gave expression after he had been here a week, "They will all have to come to Professor Gysi on the subject of articulation." Now Dr. Hergert is carrying this information to others.

I am very sure that every dentist who attends this course and gives his mind to the acquisition of what it will contain, will always be glad that he embraced the opportunity. And I am equally sure that many dentists who do not attend will long regret their absence.

THE TREATMENT OF PUTRESCENT PULPS AND CHRONIC
DENTO-ALVEOLAR ABSCESES. (BUCKLEY'S METHOD)

By H. U. SYKES, D.D.S., PLYMOUTH, O.

I think you who read this paper will sleep better o' nights if you remove only the contents of the pulp chamber before applying the sterilizing treatment, and remove the contents of the canals 24 or 48 hours later. It is very easy to turn a chronic abscess into an acute abscess of great virulence.—EDITOR.

To some of the younger men of the profession and to those of the older ones who have kept step with the progressive spirit of modern dentistry, this subject may seem to be worn out. Nevertheless, I find some men who, though they are able to excel us younger men in the mechanical side of dentistry, still treat putrescent pulps with phenol and oil of cloves. I even find that chronic dento-alveolar abscesses are diagnosed as hereditary conditions and hence incurable—that the patient is told to open them with a pin to let the pus out.

The fact of the matter is that many men are too lazy to perform the work, or too ignorant concerning the proper treatment of their cases.

The death of the pulp and its subsequent decomposition is sooner or later the cause of either a chronic or an acute dento-alveolar abscess. The first thing in any rational treatment is to remove the cause. In the case of a putrescent pulp alone, the cause is removed or rendered harmless by chemical means and later removed mechanically. The chemical removal of the cause means the *sealing* into the pulp chamber a dressing of equal parts of formaldehyde and cresol. This will positively stop the gas formation which is the cause of the pain. After the contents of the canals are sterile, they can be cleaned out, and filled according to your usual method.

In the treatment of chronic dento-alveolar abscesses, success may not always follow our first efforts. However, it is far better to have made an attempt and failed, than not to make the attempt. It is nothing short of criminal neglect not to attempt treatment of these cases. Certainly it is harmful for the patient to have pus chronically discharging into the mouth and then taken into the system, besides giving anyone so afflicted a mighty foul breath.

We do not always have success in treatment and it is less liable to be met with when the case has been neglected for years by some other less diligent practitioner.

Open the mouth of the sinus with the lance and follow up the sinus

with a surgical probe to determine which tooth is causing the trouble. The pulp chamber of the tooth is opened and the canals cleaned out, by means of a Kerr broach mounted for a right or contra-angle hand-piece. A dressing of equal parts of formaldehyde and cresol is then sealed in the canals.

If the case is not of long standing, the abscess may yield to a washing out of normal salt solution. But if of long standing (and they quite frequently are) anesthetize the part with novocaine hydrochloride and use a large sized round bur to cut out the dead bone and smooth over the roughened end of the root. The cavity is then washed out when normal salt solution and a few drops of aromatic sulphuric acid are placed in the abscess cavity by means of some such syringe as a Kolynos or Dentinol syringe, to stimulate the growth of new bone tissue. Some men use subnitrate of bismuth paste for the same purpose. As soon as the canals are surgically clean they should be filled at once.

If the flow of pus continues, it is an indication of the fact that more radical surgical work should be done. A more liberal opening should be made through the mucous membrane and the cavity carefully explored again with a probe to make sure that there is not more space than at first suspected. The end of the root should be amputated, the bone more thoroughly and more radically curetted, after the parts are first anesthetized. The post-medical treatment is the same as indicated before.

The longer the condition has been in existence, the more radical should the curetting be. Whatever you do, do not be criminally neglectful of these cases. Although you may not always meet with success, you should feel that it is far better to try and fail, than to neglect the case altogether.

BAKERS' BREAD AND DENTAL CARIES

By I. L. PORTER, D.D.S., ATWATER, MINN.

I HAVE read the article in the December DENTAL DIGEST,* on Bakers' Bread as a Factor in Inducing Dental Caries, and though I have not had as much time to study the subject as I would like, have made some notes and observations along the same line, which might help to show why bakers' bread is more conducive to lactic acid fermentation than our home-made bread or foodstuff.

* A digest from *The Dental Cosmos*, by Dr. Albert B. King.

If, when you have the opportunity, you will visit a flour mill, and get the miller to show you the process of flour making and its products, you will find the kernel of wheat to consist of several layers. Also that each mill turns out two or three grades of flour.

The first or outer layer of the kernel is the bran, and this is removed in the first set of rollers. From this it goes through several other sets of rollers, each set being a little closer and doing its share in reducing the kernel.

In the center of each kernel is a little gum-like pith or core called gluten. This gluten receives its name because of its plasticity and adhesiveness. This gluten does not make good bread, hence is not used in the fancy or best grade flour, but is mixed, when ground, with a percentage of the fancy product and sold as a straight or second grade flour.

Upon investigating, you will find the majority of our bakers use the straight or second grade flour, consisting chiefly of this gluten, for their bread, etc., they having the proper facilities for making a fair bread out of it, that the housewife cannot produce.

Thus you will see the reason for bakers' bread becoming so pasty and sticky in the mouth, and almost impossible to clean out from between the teeth properly, under ordinary means, and I believe in time these sticky masses become the culture beds where the lactic acid bacillus thrive and multiply.

I might add that this gluten is used as a breakfast food, such as cream of wheat, etc., when put through a curing and roasting process.

AWAY DOWN IN CUBA

By J. L. DUDLEY, D.D.S., NEUVA GIRONA, ISLE OF PINES, CUBA

THE American dentist in rural Cuba to-day is a pioneer—a pioneer in the sense our grandparents were in the West—he is a stranger in a strange land.

Very few towns in Cuba outside of Havana and the half dozen larger cities have gas, electric power or lighting. The oil lamp, or one's individual acetylene plant, must furnish the light. Dental depots are scarce, but those in Havana have improved greatly the last few years. American, English and German supplies of good quality are procurable in some cases at prices lower than in the states.

I have not yet been able to learn the exact number of American practitioners in Cuba, but feel safe at putting the number at fewer than twenty. Several of these men have been here for years, a number especially having come during the American occupation.

The requirements for registration in Cuba deter many from locating here. Not all American schools are recognized. The preliminary red tape, which takes a couple of months, and the manana idea are rather discouraging to the newcomer. The examination itself is conducted by the University of Havana and lasts about a week, being modeled on lines similar to the University of the State of New York. If the applicant is successful, his diploma is "incorporated" and he is granted the degree D.C.D. by the University of Havana, which is the state institution.

Havana has a colony of probably six thousand Americans (or rather English and Americans). We have on the Isle of Pines three thousand or more. At La Gloria Honduras and other points are smaller American colonies. I will be glad to give any additional information to any dentist who may care to write me.

A HANDY STUNT IN INLAY IMPRESSION TAKING

By T. A. LEACH, D.D.S., EMPORIA, KANSAS

I HAPPENED to stumble onto a little stunt the other day in taking impressions for the direct method of making inlays, that to me is a most gratifying aid, and if I can help any others by giving it to them I am glad to do so.

We will take as an illustration a cavity on the posterior surface of an upper first molar which extends to the gingival margin or possibly beyond. In such a case it is very difficult to get a good impression, especially on the gingival margin of the cavity, as the modeling compound does not in all cases force the gum tissue back enough to obtain the tooth form under the free margin of the gum. After I have prepared the cavity, or tooth, as near as I can after Black's system, I adjust an ivory matrix, extending it at least one mm. above the margin of the cavity, under the gum tissue; then slightly relax the tension of the matrix band, letting it fit loosely about the tooth at this point, not very loose, but just slightly so; then I take my Kerr's impression compound stick after it has been sharpened to a pencil point and the out-

side softened in the gas flame, and force it with considerable pressure into the prepared cavity and around the matrix. Now the matrix being slightly loose, the impression on compound will force its way between the matrix and the neck of the tooth, giving a clear impression of the tooth at this point.

I might mention here that I remove the matrix and impression altogether, invest the impression in plaster and pack with copper amalgam (S. S. White's), not removing the matrix until after I remove the impression compound from the amalgam model. I then place my bite, which I take with my inlay wax, into the amalgam model, trim it as desired, then fracture the contact tooth—which in this case would be the upper second molar—in the groove made by the matrix between the two teeth. This will leave a beautiful model of the tooth beneath the gum and afford an opportunity to make a slight flange on your wax model, and when cast and swaged in the amalgam model, the adaptation of the inlay will be as perfect at the gingival margin as anywhere else.

When burnished around the margins of the cavity in the tooth before the cement is set, the cement line is practically abolished.

WINDSOR LOCKS, CONN.

Jan. 31, 1914

DR. GEO. WOOD CLAPP,
New York City.

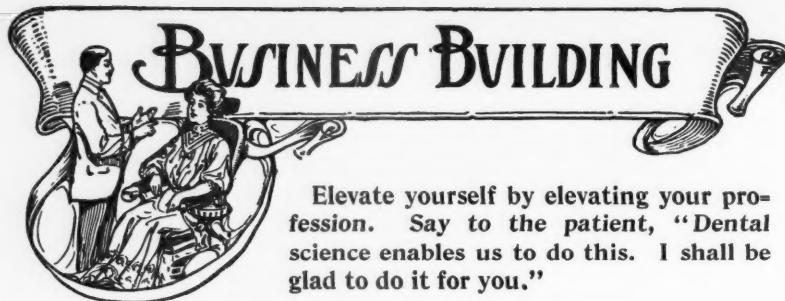
DEAR DOCTOR: I read with interest the article in the January DENTAL DIGEST, by Dr. Macfarlane, of Tomahawk, Wis.* All other articles I have read, telling of the use of nitrous oxide and oxygen, relate to operations which had been absolutely successful. This would lead one who was just beginning to use nitrous oxide and oxygen to believe that these operators never had a failure.

I have been using nitrous oxide and oxygen for about the same operations as those Dr. Macfarlane cites, with about the same results, and I feel that this paper will do more to enlighten the beginners and keep them encouraged, than any article I have read on this subject.

Yours very truly,

E. HARVEY RICHMOND.

* "My Experience with Nitrous Oxide and Oxygen."



Elevate yourself by elevating your profession. Say to the patient, "Dental science enables us to do this. I shall be glad to do it for you."

A FEW REMARKS BY AN ADVERTISER

By J. P. T.

Some weeks ago I said to a dentist who is called a rank advertiser, "What have you to say in justification of your course?"

"I've got a good deal to say," he replied.

"What is it?"

"I have talked good dentistry to 100,000 people whom you and your group never reach. I've saved thousands of teeth for people you wouldn't bother with. I've done more to render personal service to people in moderate circumstances than a hundred ethical dentists. I've gotten people in off the street by every attractive device I could think of. I've sold them good dentistry and made them happier and healthier. If it came to a show down on service, I've gotten you ethical people beaten to death."

"I employ skilled operators, the best I can get, and pay them well. I make good my guarantees. I've got a whole lot to say, and some of it is better than anything you can say against me. Some day, perhaps, I'll say it."

I wish he would.

I don't know this author, or his office or his methods, but I'm glad he has made this statement.—EDITOR.

Editor DENTAL DIGEST:

I was very much interested in the December *DIGEST* article, "The Advertiser—The Lesson,"—and in answer to your request for the advertisers side, I venture to submit the following.

First—I wish to emphasize one fact. The advertising dentists as a whole, are fully the equal, in ability, to their ethical brothers. If you had ever been in an "ad" office and seen the constant stream of patients exhibiting ill-performed, ill-judged, and wholly unsatisfactory work done by so-called ethical men, you would realize that there are many who ought never to be allowed to take money under the pretense of being dentists. We see these things and when we read in the paper that Dr. X.—read a paper at some Dental Society about Prophylaxis or something else, and the next minute examine the mouth of one of his patients whose fillings in only six months are dropping out one by one, do you wonder that we outcasts often feel that in the final weighing of things the Pharisee will receive his due reward.

Second—A man may be able to perform good work and yet not do it. What quality of work is turned out in the offices in large cities I do not know, as my experience has been in cities of from 35,000 to 100,000 people, but in these smaller offices I know that every man tries to do his work to the best of his ability. Why? In the ads of the offices in the chain where I am employed is the statement "All work guaranteed five years." My ethical brothers will probably say "Bunk," but that guarantee is lived up to and work is put in with that end in view. A man who persisted in doing "painless" work by leaving decay in the cavity would get his head cut off, as soon as his carelessness was discovered.

After six years' practice in a small country town, I awakened to the fact that financially, I was not better off than when I started and I began looking around for a new location. Then I was offered a position in the company with whom I am at present. Out of curiosity I consented to an interview with the owner. After he had stated the financial end of the proposition, I said, "Doctor, I don't believe I will accept; I have always tried to give my patients the best work I am capable of, and I don't want to go into anything that will necessitate skinning them." He looked at me a moment and answered, "The office I put you in will be absolutely under your charge and I want you to do every piece of work as well as you possibly can, the better work you do the better I shall be pleased, for if the work is not good, all the money I spend in advertising won't keep business coming." That was four years ago, and to-day or any time in the past, I would not hesitate a minute to allow any unprejudiced dentist to take my entire card catalogue and inspect any piece of work I have ever done. Another thing he said, "If a piece of work is unsatisfactory, make it over at once, don't under any circumstances try to kid a patient along if they have a legitimate kick."

How many ethical men would do as much for their patients? Surely not the strictly ethical man who once boasted to me that, when an old man for whom he had made a plate, came in with a complaint that it wouldn't stay up, said: "Hold your tongue up against it and it won't fall down—good day."

Third—One of the things always thrown at the "ad" men is that they put on two many gold crowns. From an esthetic point of view, they may be wrong, but the average patient does not care a snap for esthetics, but *does* want fairly permanent work. Theoretically a tooth should be filled as long as there is a chance for the filling to stay. With the average run of patients, filling and refilling a doubtful tooth is not appreciated, they cannot see why they should be obliged to pay for three

or four different operations when a permanent one could be done the first time and I heartily agree with them.

We advertisers see altogether too many patients who have had their teeth filled a year or two before, and whose fillings have practically all fallen out, and who have been told that "their teeth are too soft to hold fillings and they had better have them out." Do you realize what the patient thinks. They have paid \$50, perhaps, to have their teeth saved and it is all wasted, and they have resigned themselves to losing them. Why? Because some "esthetic" man who wasn't a good enough workman to put in a good filling, had failed in his honest duty and had as surely taken their money without any return as if he had put his hand in their pockets. I maintain that it is far better to crown every doubtful tooth, doing the work in a painstaking way. If it be done right, at least some work will remain and the patient's confidence in dentists will not be entirely lost.

So far, I have been defending the advertiser, but you want to know what the profession owes to him.

Is there any other nation in the world where the laboring class pay as much attention to dental matters, as in the United States. The ethical dentist who charges twenty dollars per hour, etc., and hurls anathemas at the advertiser wilfully closes his eyes to the fact that a man earning fifteen dollars a week can not pay such prices, yet he condemns the man who is willing and glad to give *trained services* to the people at a price within their means, and would turn these people over to some new-fledged graduate with the ink still wet on his diploma, and who could not put in a good filling to save his life.

For years the advertiser has preached "Save your teeth" in the newspapers, and the results have been the creation of that interest in the teeth that exists in our own country and in no other.

Twenty-five years ago, only the well-to-do ever had a tooth filled, the middle class had them out, and a set made. To-day this same class knows and appreciates what their teeth mean to them, and have them filled or crowned.

The education has not been all by newspaper ads, however. A patient enters an office suffering with a "sick" tooth. "Take him out, Mister Doctor." That tooth represents fifty cents as an extraction, but five dollars as a crown. Does any one think that by some hocus-pocus the ad man slips a shell over that tooth and separates the victim from his five. Not for a minute. Just as much effort and education must be expended in an ad office as in the most ethical officer on Fifth Avenue, to convince the patient of the wisdom of saving that tooth, more, if anything, because the patient is utterly ignorant of

dentistry. There is probably other work. The ad man takes lots of time, shows the necessary work to the man and explains. Every bit of his work is educative, and is and must be of the most effective kind to instill interest and appreciation in the uneducated listener.

Who is preaching tooth saving to the laboring class to-day? The ad man, because he *reaches* them with his ads, and is ready to spend lots of time to educate them in saving and not extracting. His motive is not altruistic, but he preaches it nevertheless, and the seed is sown and once the patient has learned how nice it is to have good teeth, he becomes a living advertisement for dentistry. He spreads the good work among his friends and who gets the benefit? Every dentist, because it is human nature to visit the nearest man, and Dr. Ethics next patient is very likely impelled to have his teeth fixed up because his friend Joe did and, as all dentists look alike to him, he goes next door instead of spending ten cents carfare to get to the fellow in the newspapers. Probably my ethical reader will say, "true enough," but it would have been much better if this education had been given by a dentist who is interested in his patients' welfare, and not simply as a money proposition. Very true, but, again that "but." Why have Brother Bill's Letters attracted so much attention? Because they have laid stress on the one thing the average dentist is not capable of doing—selling his wares—and educating his clients at the same time.

Before I became an advertiser, if a patient wanted his teeth filled, I filled them; if he requested extraction, I perhaps made an effort to save them, but my talk lacked conviction and I pulled many teeth. Last week in an office advertising "Painless Extraction," I extracted three teeth that might have been saved, and treated sixteen that the owners came in to have taken out. Every one of those sixteen received a lecture on the value of that tooth, and the value of the others, and I have talked the wisdom of visiting the dentist before the teeth ached. With one exception, I was able to remove the nerve without pain and have hammered into their minds that dental work is not torture, but at most, only mild discomfort. I inquired as to their friends' teeth and their relatives. I got them interested and I will wager every one mentioned the fact that they were having their teeth fixed, to their friends, who will in turn be interested. Will the friends come to me? If they all did, I should be swamped with work. Perhaps one or two may, but one goes to the same church as Dr. Brown, so visits him; another belongs to the same lodge as Dr. Green, and Green gets the benefit.

Now, Mr. Editor, this educative work is going on every day in every advertising office. An advertiser has to convince his patients of the value of dental work or he won't have much to do, and one that can't

do it will fail. Advertising is not an open and easy road to success. One who can not convince his patients, may make a living, but nothing more, and always remember that this education is to a large extent given to those people who never under ordinary circumstances, would have anything but extraction performed, for to the unenlightened the mere say so of a dentist, that it would be better to save than to extract the aching tooth, is not very convincing; they are from Missouri and I am satisfied that in saving their sixteen aches, I have done as much to advance the cause of dentistry as ethical men in the state have done in the same time.

If this educative force was the only thing accomplished, I should still feel that the advertisers were worthy of commendation for something, but there are other things.

What has forced the profession, as a whole, to seek the elimination of pain from their practices? Not their own feelings of sympathy for their patients, but because it was a hard job to convince a man that suffering was agreeable, when some Onion Pinless Co. could do it without that pleasure. And the painless stuff isn't "buncombe," either. If, in preparing a cavity, my patient complains, I wheel up my N O and O outfit. Enough said. The patient goes home and meets Mrs. A. and says she has had her teeth filled; Mrs. A. inquires "did it hurt?" and is told that the doctor gave her a tube to smell and she got twigly and it really did not hurt a bit. The next time Mrs. A. goes to her dentist she wants to know why he hasn't the tube so small so she needn't be hurt so badly, and another N O and O outfit is installed because that dentist knows that Mrs. A. will promptly desert him if he can't do as well for her as that advertising quack. I consider that every advance made in eliminating pain is worth more than any other thing in the saving of teeth; for once the fear of the dental chair is removed, hundreds will willingly have their work done, who now wait until driven by pain.

Who first spread the method of pressure anesthesia?

When I was in college a professor told me, on asking about it, that it was one of the dodges of the d——d quacks, but I will wager he uses it to-day. An ethical man discovered it, the advertiser grabbed it so he could make pain painless, and then the rest of the profession saw a great light. When I was in college a seamless crown was roundly denounced because the advertiser made them that way, but bye and bye the ethical man woke up to the fact that a method by which he could make a crown, perfect in shape and contour in thirty minutes, had real advantages over putting an hour or two over a soldered affair that looked about as much like a tooth when finished, as a thimble.

Patients would compare work and somehow a thing without proper form showed clearly that something was missing somewhere, and so the era of making a perfect seamless crown entered, and I don't think any dentist to-day, will deny that a crown, made from a copper band model with a carved top and swaged on a crown press, is superior in every way to the shapeless things that were called crowns fifteen years ago, and were put on in every office but the "ad" ones, who required a deposit when the work was started, and demanded full payment when finished. These things Brother Bill has spoken of many times in his worthy efforts to place dentistry in a proper light to its patient and raise the dentist from financial stringency to independence? This putting the financial side of dentistry foremost is the only thing that separates the advertiser as a whole from the ethical man. Individual advertisers may defraud their patients, but are the ethical men's hands any cleaner?

I once saw an amalgam filling inserted by the secretary of a state society for which he had charged nine dollars, telling the patient it was platinum and much better than a silver filling, and to make it worse, it had been in two weeks and the nerve had died, and he demanded five dollars more to treat and refill it.

There is not a single thing in any branch of dentistry that I have not seen time after time performed by ethical men, that were a disgrace to the profession. There isn't any question that the non-mercuric and metallized rubber plates are superior to the old red rubber ones, why then, should the ethical men make such a "holler" if the ad man gets fifteen dollars for them, when he himself charges the same price or more for the old red rubber kind? I don't believe any thinking person will deny that a man who makes ten plates a week is better fitted to make a good set, than a man who makes two a month, and hates plate work. Who was it that familiarized the public with bridgework? If you had never seen a fountain pen advertised, would you buy one when you saw it, as quickly, as if you had already had your attention called to it by an advertisement?

Any dentist who suggests bridgework to-day is enabled to point his talk because the patient is familiar with it through the advertisers work and is half convinced before a word is said that it must be desirable, or it wouldn't be advertised in the papers every day.

How about the aliens who are flocking to our shores? Often they do not wash every day and have a great love for garlic. Gregorius Globovanarouski has teeth, however, and they will ache. He perhaps speaks twenty-six English words and brings two friends whose combined vocabulary is two hundred, what would you do with that man. Use ethics? That delicate lady in the chair would be offended at the garlic,

and unless I am mistaken, you would yank that tooth as quick as you could and hope they never would come back.

No advertiser would hesitate; having a separate examination room, the garlic doesn't offend the other patients and if they didn't have words enough to swap ideas, he would bring out samples and show what he meant, and Gregorius would be enrolled in the great army of dental patients. What is better, he would bring in his wife and children, and surely their teeth are just as valuable to them as Mrs. Vastorklits' are to her; and what is also interesting, they expect to pay for their work, and do so.

One little thing is worth mentioning. Go into any first-class advertising office and look around for a sterilizer, you will find it and find it busy, not as an ornament; notice that every patient has a clean towel, that the instruments are polished up after each operation, that the dentist washes his hands, also, and that there is a girl whose work is to see that everything is clean before a new patient sits down. Does this happen in one-half the ethical offices? It does *not*. What is the value of talking asepsis with a dirty bracket. If ethical men would call once a year on any prominent advertiser, take one look around, and then compare what he sees with the conditions in his own office, there would be fewer dingy and unsanitary offices scattered around.

I firmly believe that the time will come when work performed will be the criterion of a dentist's standing, not the size of his sign; and when that time comes, dentistry will be a profession that saves teeth, not simply fills them; ninety per cent. of dentists will not be daily engaged in knocking every other man in the profession, and a man's method of getting business will not be criticized, but only when he gets it, whether his treatment is worthy of praise or condemnation.

THE HANDS OF THE DENTIST

CLEANLINESS, though the first essential in a dentist's hands, is not by any means the only desideratum.

Patients are enormously influenced by externals. The cleverest aseptic hands lose much of their magic if they are hard, rough, damp or cold.

Careful washing, equally careful drying on small once-used serviettes, the use of emollients, meticulous care of the nails will do much. The dentist whose hands are habitually either damp or cold, is advised

to wash constantly in warm soft water, boiled water, or water artificially softened. — Abstracted from the *Zahntechnische Rundschau*. — *The Dental Record*.

THOSE UNBUSINESS-LIKE PHYSICIANS

EVERY once in a while some one objects to the business building campaigns on the ground that the physicians and lawyers are no better business men than we are. That may be true of the professions as a whole, but it seems to be my lot to encounter chiefly those who have a very well-developed bump of business sense. The latest instance may serve to still some of the objectors. At least I think it might if it befell them.

My wife developed appendicitis one afternoon, and three physicians appeared on the scene. Dr. A., the family physician, brought Dr. B., a surgeon, to confirm his diagnosis. Dr. B. advised an immediate operation and word was sent to the hospital to get the operating room ready. A few hours later Dr. B. appeared there, performed a very neat operation on a case without complications, and left that night for the West. He did not see the case again until it was nearly recovered. He had spent thirty minutes on his visit to the house and forty-five minutes in the operating room. His bill was \$200.

Dr. A., in whom we have great confidence, gave the anæsthetic. I don't know what his bill will be but not less than \$25. Dr. C. acted as assistant and passed instruments, ligatures, etc. His bill was \$20.

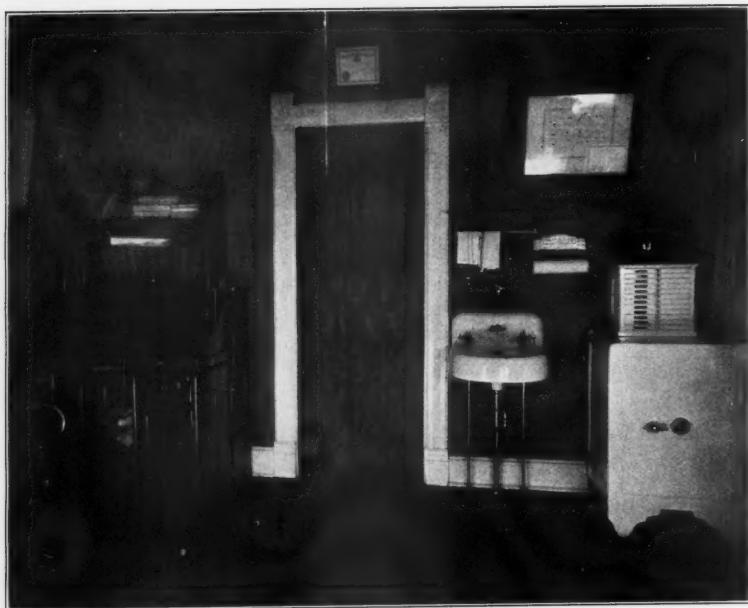
I don't say these bills were too high. They are all men of experience and skill. Their services were worth what they charged. I'm satisfied. But when I think how long it takes a dentist to earn \$200 more than his materials cost, and then think of this surgeon getting \$200 for seventy-five minutes (I paying all hospital expenses), I don't think *all* the members of the medical profession are so very unbusiness-like.

How does it look to you?

"ONE" FOR THE INCOME TAX

Since the income tax has become effective, it's a forgone conclusion that a quietus will be put on the inflated five and six thousand dollar practices of the little towns that have been so misleading to younger men.

H. L. H.



Offices of C. E. Whitney D.D.S. Marshall, Minn.

TO THOSE WHO NEED ADVICE

Editor DENTAL DIGEST:

Here is a little article to print in your journal if you can use it.

Don't be a fool like I was for fifteen years and try and compete with the cheapest man in your territory in prices. I have learned by experience that a large percentage of the people who come to my office for dental services are intelligent enough to know that they can't get something for nothing, and it is up to the dentist to show them why it is better to pay more and get a better article.

I tell people who ask how much a plate or a crown or a bridge will cost, that it depends entirely on what kind of a job they want and explain that they can buy a suit of clothes or a gown or a house and lot, at a price corresponding to the kind, quality or location, and nearly always I am able to sell a good job at a good price, and then give them what they buy. Very often I see cases where some dentist had the selling ability, but he was a crook at heart and he gave the patient shoddy for a good price, and the chances are that he thought the patient would never know the difference.

Only a few people are fools and there is no surer way of spoiling a practice than by being crooked with your patients.

I have increased my business from three thousand a year to between seven and eight thousand, by this method, and I know it will work.

People come to me from all over the country, out of other fellows' territory, to pay me more money for a first class article than their home dentist asked them.

Just a few days ago a lady came in from another town and wanted to know what I would charge for two superior central crowns, and I told her that it depended entirely on what kind of crowns she wanted. She said she supposed all crowns were alike, as her home dentist told her that he would put on the two crowns for three dollars and a quarter apiece, and he didn't say anything about a better crown for more money. I sold her two Richmond crowns for ten dollars apiece, and she said she was glad she came to me, as she wanted good work and was willing to pay for it. I presume the other fellow is wondering if he didn't make the price low enough, because he didn't get the work.

I think the reason there are so many dentists in the country who are just existing, is because they haven't learned that they must be square with their patients and give them what they pay for, and then have the selling ability to get a fair price for a good article.

I get twelve and fifteen dollars for rubber plates easier than I used

to get eight dollars. Why? Because I give them what they buy and show them they are getting a good article.

If you don't believe this method, try it.

A Dentist who used to "*JUST EXIST.*"

A LOOSE LEAF ACCOUNT BOOK

BY LEROY D. SHAFFER, D.D.S., GROVE CITY, PA.

I HAVE been a regular reader of THE DENTAL DIGEST, and it has been very profitable to me in many ways.

Two years ago I lined with the writer, Brother Bill, and from his boosting I decided to improve my business side.

First I left the conventional dental location on second floor of business block and built a neat office to my residence which is just off the business district. I looked for fewer patients, but I have now more patients, less shopping and a better practice. I put in a Lee S. Smith & Son Co. white porcelain outfit, laid a blue tile flooring in lavatory and ladies' dressing room. Then I proceeded to read Brother Bill's book, and with a new system of business I am making two dollars for one, and I know my daily, weekly, monthly and yearly business exactly.

I have a looseleaf booklet, and with this book I can tell you the number of patients, gold, silver, gutta percha, porcelain cement plates, extraction, hours worked, number of anaesthetics, dental office expenses, amount of business and amount of credit, cost and memoranda on any day, week or month and year complete college expenses.

The books as can be seen by the cuts are for appointment time, service credit and cash. I have a complete day book, also sheets for estimates, with name, location rating, phone and terms of settlement, with itemized ledger service.

The enclosed sample I have been using for two years, and I have had several inquiries for the complete book, but I have never tried to market it.

I would be glad of any suggestions Brother Bill or the editor of THE DENTAL DIGEST might care to make.

Shafer's (Brother Bill's) is simply the osmotic condition caused by reading the DIGEST, so take it from me that any germ life worth catching will find a good distributor in the fertile field of the DIGEST.

A LOOSE LEAF ACCOUNT BOOK

Shafer's (Brother Bill's) Systematized Dentistry or Appointment, Cash, Day and Order Book all in one.

Day of the Week			EXPENSE		FILLINGS		Inlays		Crowns		Brdg's		Plates		Anes.									
	Dr.	Cr.	Dental Supplies	Office Supplies	Hours	Porcelain	Gold	Amalgam	Cement	Gutta Per.	Porcelain	Gold	Richm'd	Porcl'n	Gold	Upper	Lower	Treating	Devitalizing	Cleaning	Profolactis	Extracting	Orthodontia	Examinstion
						Porcelain	Gold	Amalgam	Cement	Gutta Per.	Porcelain	Gold	Richm'd	Porcl'n	Gold	Upper	Lower	Treating	Devitalizing	Cleaning	Profolactis	Extracting	Orthodontia	Examinstion
Sun.																								
Mon.																								
Tues.																								
Wed.																								
Thurs.																								
Fri.																								
Sat.																								
Bal.																								

1. P, Porcelain
2. G, Gold
3. A, Amalgam
4. C, Cement
5. G, Gutta Percha
6. D, Devitalized
7. T, Treatment
8. C, Cleaning
9. P, Prophylaxis
10. E, Extracting
11. O, Orthodontia
12. Hrs, Hours
- N. O. O., Nitrous Oxid and Oxygen

The Shafer System shows the following:

Time of appointment
Name of patient
Kind of service
Hour spent
Amt. of work (Dr.)
Amt. of cash rec'd (Cr.)
Daily expense and
the amt. rec'd on acct.
Estimates and general
memoranda

1. Pl, Plate
2. Cr, Crown
3. Br, Bridge
4. I, Inlay
5. S, F, Steele's Facing
6. P, C, Porcelain Cusp
7. A, Aluminum
8. E, Ether
9. C, Cocain
10. Ch, Chloroform
11. S, Somoform
12. Ex, Examination

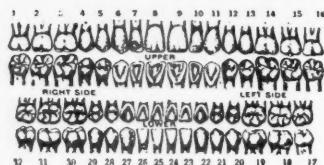
1. M, Mesial
2. D, Distal
3. L, Labial
4. B, Buccal
5. L, Lingual
6. O, Occlusal
7. B, P, Buccal Pit
8. I, E, Incisal Edge
9. D, L, G, Distal
plate & No. of patients
Lingual Groove

The dental expenses: Gold, Alloy, Teeth, Burs, Strips.
The office expenses: Rent, Water, Girl, Gas, Phone, Heat, Light, etc.

MONDAY

MONTH _____

19 _____



1. M—MESIAL
 2. D—DISTAL
 3. LA—LABIAL
 4. B—BUCCAL
 5. LI—LINGUAL
 6. O—OCCLUSAL
 7. B-P—BUCCAL PIT
 8. I-E—INCISAL EDGE
 9. D-L-G—DISTO-LINGUAL GROOVE

TIME	APPOINTMENT	SERVICE	HRS.	DR.	CR
8 A.M.					
9:00					
9					
9:30					
10					
10:30					
11:00					
11:30					
12					
12:30					
1 P.M.					
1:30					
2					
2:30					
3					
3:30					
4					
4:30					
5					
5:30					
6					
6:30					
7					
7:30					
8					

DAILY BUSINESS

EXPENSE

REC'D ON ACCT.

MEMORANDA

DAILY BALANCE

ANNUAL STATEMENT		December 31, 191.....	LIABILITIES
RESOURCES			
Cash on hand and in the bank		College expenses.....	
		Value of time in college for 3 years	1st year
			2d year
			3d year
Stock			
Invoice		Annual depreciation, 10 per cent on equipment	
			College expenses.....
			Interest on investments
			Value for 3 yrs. time On the invoice
Equipment			
Bills payable			
Notes receivable			
			Notes payable

Net profit divided by 52 week equals net weekly salary.
 Annual depreciation on the dentist 5%. This is allowing 20 years as the average length of time that a man
 can stand the strain (or overhead running expenses).

EXPERIENCES

DENTISTRY "A LUCRATIVE PROFESSION"

Editor DENTAL DIGEST:

The ad below and remarks by C. F. C. in the November DIGEST are my only excuse for what will follow.

DENTISTRY PAYS BIG MONEY!

Demand for properly educated dentists greater than supply. WESTERN DENTAL COLLEGE has complete equipment and facilities. Low tuition. No extras. FREE CATALOG. Address, WESTERN DENTAL COLLEGE, 1161 Locust St., Kansas City, Mo.

This ad to me is very truthful and I agree with every word of it. This college also seems to know the value of "printers' ink," and I am rather surprised that the dean and the rest of the professors didn't use their names in connection with this ad.

This ad proves what I have often contended, that everybody in dentistry is advertising but the poor dentist like C. F. C., and hundreds like him, who are barely making a good living.

I differ very much with C. F. C. and claim that dentistry is one of the most lucrative professions that a young man can enter. If he is a "live one," he can easily make from \$3,000 to \$5,000 and in many cases from \$6,000 to \$8,000 clear for himself every year.

This isn't theory or magazine talk, for I have done it myself for nearly ten years.

There is one thing he must do and that is use some "printers' ink." The college and the big dental magazines are doing it, and the dental supply houses and manufacturers are doing lots of it. When these companies have something new for the profession, do they wait for one dentist to tell the other how they like it and advise them to use it? Not much.

You are greeted with a full page ad in the dental magazine. You receive literature by mail about it. Special demonstrations at all dental conventions and every method known is used to introduce these new goods.

We also have various dental specialists and they avail themselves of the opportunity of advertising by mailing their cards to the dentists for miles around.

Why shouldn't the ordinary dentist do a little mailing as well as everybody else in dentistry? Why shouldn't he mail his cards, little booklets and letters on the care of the teeth and other such advice? If he needs more business, this will bring it and it will bring a better class of patients than any form of newspaper advertising will do.

Why should the colleges and dental magazines condemn what they themselves do?

If the DENTAL DIGEST had adopted the same methods that are used by the ordinary dentist to develop his business, its circulation would to-day be about 1,500 instead of 15,000.

Advertising is a modern necessity. High-class advertising seldom mentions prices. Let me quote some of our leading national advertisers who seldom mention prices or offer bargains, but instead represent the highest priced goods on the market. The Packard, Pierce-Arrow and Peerless Automobiles. The Steinway Piano, Royal Baking Powder, Pear's Soap, National Biscuit Co., Kodak Cameras and so on for many pages.

The advertising dental parlors have proven that their form of advertising pays. I have proven to my own mind at least that high-class, non-mentioning price dental advertising pays.

My advertising, or "publicity," as I have always termed it, has varied from plain business cards to advice in regard to the care of the teeth. Some have been in form of letters, and other times in a neat and well printed booklet.

I have never mentioned prices nor offered a single bargain. It has been my practice to mail this matter direct to the people. I have never used the newspaper or distributed any advertising from house to house by carrier.

Look in your dental office and see if you are not using about everything that is advertised in the dental magazine.

At home you will find the following. You wash your hands with Ivory or Palmoline Soap; eat Quaker Oats; your soup is Campbell's or Heinz's; the baked beans are Van Camp's or Heinz's. Your wife bakes with Royal Baking Powder; scours with Old Dutch Cleanser; cleans her teeth with a Prophylactic tooth brush. It pays to advertise. The whole world proves that. In dentistry it brings fine results and you don't have to use the "advertising quack's" kind. "Nuff sed."

A. H.

CRITICISING A CRITIC

Editor DENTAL DIGEST:

In the December issue of the DIGEST there appears an article: "A Friendly Criticism of Brother Bill." The writer tells of some of the conditions in his town, and the hard time he is having trying to make both ends meet. The conditions he describes are similar to the ones

that have confronted me since beginning the practice of dentistry. I have had apparently the same class of people which he describes, but have succeeded in getting a whole lot more out of dentistry than he has. I have been in practice about the same length of time and in place of making a bare living, have lived well and saved eight thousand dollars. He describes his city as a neighborhood affair, and that the entire neighborhood knows when Mary Ann has a toothache, knows how she suffers, tries to treat it and finally advises Mary Ann to try the "painless dentist." They also know that the painless dentist broke Mary Ann's tooth, which to start with is an excellent advertisement for the better class of dentistry. In the course of events Mary Ann gets another toothache and goes on a bargain hunt; she visits every dental office and is highly insulted at the man who wants \$75 to fix her teeth. No doubt Mary Ann was as much horrified at being asked \$75 for the work on her teeth as Dr. D. J. would have been, had the architect asked him \$30,000 to build his home. I'll venture to say that Mary Ann was never shown the difference between a \$25 job and a \$75 one. To Mary Ann as to Dr. D. J., a crown is a crown regardless of price.

Had Mary Ann come to my office, I would have first found out what class of dentistry she could afford to pay for. I would have shown her how much better she could have had the work done for \$75 than for \$25 and before Mary Ann had left, I would have made it clear that if she made the appointment for next Saturday she would have to make a deposit on the time or I would not reserve it for her. If it were a \$25 job that Mary Ann could afford, she would have gotten it (providing I was as hard up as the doctor) and all the while I was making that \$25 job I would have been showing her how much better she could have the work done for more money. Just as Mary Ann's toothache became a neighborhood affair, so my \$25 job and \$75 would become a neighborhood affair, and before I got through with Mary Ann, all the neighbors would have learned that dentistry, like everything else in this world, could not be gotten for nothing, and that the real cheap work was worth just what they were paying for it. To prove all this I have a number of extracted teeth with poor fitting crowns and bridges on them, some others that I have made for samples, showing the amount of work to properly treat, prepare, fill, crown or bridge.

Dr. D. J. writes, "It took nearly thirty years to prepare and equip" himself for the practice of dentistry. To my mind the doctor is not fully prepared to-day. He is no business man, and unless he can apply a greater amount of intelligent devotion to the other business he is thinking of going into than he has in dentistry, I am afraid that he will continue making a bare living. It is just as hard selling good

shoes as it is selling good dentistry. The man who could not tell his customer the difference between the \$2.50 shoe his competitor was selling and the \$5 shoe he was showing, has no right to expect or complain, if the customer buys the \$2.50 shoe next door. The patient would have to be of a weak mind to pay the one man \$10 for a crown if she could get one just as good for \$5. The eighteen weeks Dr. D. J. made no crowns, because he could not get \$6 for one, is a bad showing for his salesmanship. Did he expect the patients to pay him \$6 for the same class of work they could get for \$5, or did he show them that he could deliver a better class of work for \$6? If he convinced the patient that he was actually giving them more for the \$6, no doubt the patient would have been glad to take it.

Dr. D. J. speaks of two dentists in his town who are well off. How did they become so? Were they forced to put on \$5 crowns because someone else did, or was their personality and business ability great enough to sell better dentistry?

Located in the same block with me are five advertising parlors who are making crowns from \$2 to \$3. I have never found it necessary to make one for less than eight dollars and often get from \$15 to \$25. The crown I put on for \$8 is far ahead of the one they are putting on for \$2 and \$3 and those I put on for \$25 are far ahead of those that are put on for \$8 and \$10. All of my patients that get \$8 crowns know this difference, and know and tell their neighbors some of the differences between the different priced crowns. The majority of the people I have met, do not want the poorest of anything, nor, do they want to pay more at one place for the same article than they can get it at another. Show your Mary Ann's the difference and I am sure they will take the best they can afford, and some of their neighbors who helped treat that bad toothache, will be glad to get something a little better than Mary Ann's, and it will not be uncommon to hear her say, "I wish I could have afforded the \$75 grade of dentistry in place of the \$25," just as she now says, "I saw a lovely dress, wish I could have afforded it in place of this one."

Very sincerely,

F. J. B.

DR. FRACKELTON REPRESENTS WYOMING

Dr. William Frackelton, of Sheridan, Wyo., has been appointed chairman of the executive committee for Wyoming at the Panama-Pacific dental congress to be held at the time of the exposition in San Francisco.

"HOPING FOR HELP"

Editor DENTAL DIGEST:

I have been a subscriber to your magazine since leaving college and think I could hardly get along without it. I find many interesting articles, and I would like some help if you can find place for my letter in THE DENTAL DIGEST.

I am a young man, graduated from one of the best colleges in the country less than two years. I am in a manufacturing town of about 1,600 population, with no competitors and no town nearer than ten miles. Two cities, one of some 15,000 population and the other of about 12,000, are drawing a large percentage of the practice away from here.

The dentist whom I bought out did not like to extract, and so sent all the cases that he could out of town, after which he would make the plates. He practised this for the nine years he was here. Many still think they must go out of town to get their work done. I have had fine success as an extractor, and my work has been satisfactory, but I wish to get at those families who have been going out of town. There is no place for an office in the business blocks of the town, and my office is in my house, less than a minute's walk from the stores.

I have tried to do as did the man before me—a cash business. This is not always possible, however, although I did not lose \$5 during the first twelve months I was here. My business then was over \$100 a month; the second year does not seem to be so good.

I try to be found in the best company, keep my office, instruments, and person clean to a spot, and I treat everyone courteously. Am pretty badly in debt yet, but am slowly getting out. Would have better equipment if I had room, but my office is small.

My predecessor claimed, at the time I bought him out, that his health was poor. He led me to believe that he had done from \$1,500 to \$3,000 a year for the last nine years.

My greatest problem now is to get the people coming my way instead of going out of town. With the territory that I have here I should be working night and day, but I am not. I have my card in the local paper, but somehow I do not seem to be getting next to the better class of people very fast. All that I have worked for are satisfied.

Would be very grateful if you could help me out by some suggestions. Hoping for help, I am,

Yours,

"C. H. P."



PRACTICAL HINTS

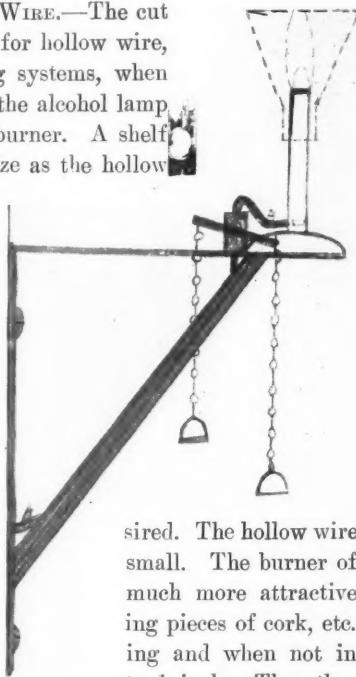
[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.]*

ONE OF THE USES FOR HOLLOW WIRE.—The cut here shown is one of the many uses for hollow wire, such as is used in gasoline lighting systems, when doing away entirely with the use of the alcohol lamp and substituting the small Bunsen burner. A shelf bracket made of wire of the same size as the hollow wire used makes an outfit that is an ornament rather than otherwise and can be constructed in half an hour. The burner is soldered to the bracket, a high-low gas regulator is then soldered to the bracket and a small piece of the wire tubing soldered into each. Then the bracket is placed on the wall or partition or other convenient place near the chair and the service tube connected with the gas supply wherever it is desired. The hollow wire is so small. The burner of much more attractive pieces of cork, etc. and when not in use a pull of the chain reduces flame. The hollow wire is more secure than when used on the table with a rubber hose.—

WALTER A. LOOPE, D.D.S., CLEVELAND, O.

PREVENT MIRROR FROM STEAMING.—A little glycerine on mouth mirror will keep steam from forming on same when working.—J. H. PEARCE, D.D.S., Peoria, Ill.—*The Dental Review*.

* In order to make this department as live, entertaining and helpful as possible, questions and answers, as well as hints of a practical nature, are solicited.



PRESSURE ANESTHESIA IN MULTI-ROOTED TEETH.—Operations are many times delayed owing to the necessity of waiting for pulp devitalization, because difficulty is experienced in the employment of pressure anesthesia in multi-rooted teeth. The cause of this difficulty lies in the fact that the cocaine solution is forced into the pulp tissue of the larger canal instead of into that of the smaller—that is, it follows the line of least resistance—making the removal of the pulp from the small canals very painful.

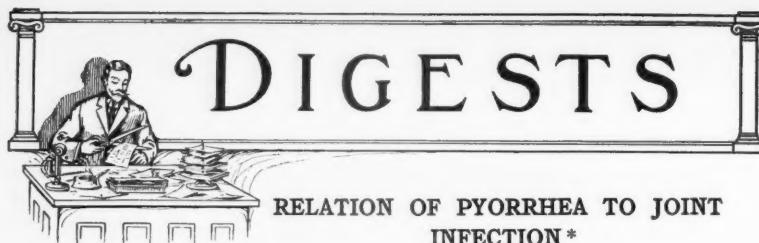
To avoid this, an exposure of the pulp is made, a small pellet of cotton previously saturated with the anesthetic solution is placed over the exposed pulp, and pressure is produced. I prefer wax, base-plate wax in summer, bite-wax in winter, to vulcanite rubber, especially in cavities involving the approximal surface. Generally, by one application the pulp in the chamber and in the largest canal will be anesthetized. If the initial exposure is small, one application may be required to allow painless excavation for a larger opening. The pulp is removed from the large canal, a wisp of cotton inserted, a ball of wax slightly larger in diameter than the mouth of the canal is rolled and packed firmly into it. The first procedure is then repeated in order to anesthetize the pulp tissue in the smaller canals, the pulp is removed, and then a barbed broach is pressed through the wax in the large canal and given a half-turn to engage the cotton. On removal of the wax stopping, the canals are ready to be dried and filled.—W. N. MILLER, D.D.S., David City, Nebr.—*The Dental Cosmos*.

THE REMOVAL OF COMPOUND FROM CAST.—When from overheating it seems almost impossible to remove compound, do not cut and ruin the cast with a knife, but in the usual way press the warm mass of compound against the clinging parts and hold for a second or two, and if it does not come away dip the cast in cold water once or twice, keeping mass of hot compound ready and it will easily come off after the cast is chilled a little. We find this method much better than the chloroform solvent and quicker, as it cannot penetrate the cast.—WALTER A. LOOPE, D.D.S., CLEVELAND, OHIO.

TO PATCH A LEAK IN BELLows DISK.—Often a bellows disk will break during an important soldering operation. To make a quick repair—providing break is not too large—cut a piece of red vulcanite rubber twice the size of break, apply a little gasoline and press firmly to place. Do not remove the linen cover from the rubber, for it makes a stronger patch.—R. L. HESSER, D.D.S., Frankford, Mo.—*The Dental Summary*.

TO THOSE USING METALLINE CARVING COMPOUND FOR MAKING CUSPS FOR SHELL CROWNS THAT WILL ARTICULATE.—I would suggest a method that I have used successfully for some time. Instead of using a knife or similarly sharp-edged instrument, take an old vulcanite file and file away your surplus material with the coarse portion of the file, using the fine portion for the finishing touches. After you have filed the metalline to the desired shape, remove the metalline cusp from the band and file away the surplus portion that has pressed into the band, by placing it on the file and rotating it backward and forward. It is now level and can be placed on a flat surface, preferably not metal, as that is usually cold and would be likely to cause the metal to chill rapidly, thus destroying one of the important principles. I would suggest that you use a piece of smooth pine board. The model cusp which has been made from the above mentioned efforts is now placed on a flat surface, and the die ring placed over it; we are now ready to pour the metal and make our die. Sometimes you will notice that you do not get good dies; this is due to the fact that the metal did not hug the metalline cusp model closely; this can easily be obviated by using the following precaution. Pour the metal as customary, using a metal from which you are accustomed to getting the best results (I use Melotte's), but instead of pouring the ring not quite full, pour it more than full, until it stands above the ring about the thickness of a five-cent piece. As soon as the metal has been poured into the ring, take a piece of pasteboard the thickness of a five-cent piece, or just thick enough so that you will not burn your fingers when you press it against the metal; now with the pasteboard and the metal still liquid, press as if it were the metal, into the ring; this will cause the metal to fill up any air space that may be present in the metal; it will of course hug the model cusp perfectly and result in a perfect cast; when you use the pressure with the pasteboard, you have caused the metal to become level with the top of the ring and the surplus has run off down the side of the ring. This is a great aid to the swaging process, for when you hit your swager a blow, all of the pressure and strain of that blow does not fall entirely on your ring, as the die itself is resting on the anvil. You may use all the pressure you care to without any fear of bursting your ring or spreading it so it will not fit your swager with ease.—F. E. L. THOMAS, D.D.S., Muskogee, Okla.

WHEN THE ENGINE BELT SLIPS.—If the engine belt slips give it a bath in a weak solution of rubber dissolved in gasoline. If it appears too sticky wash out some of the rubber in clear gasoline. There will be positively no more slipping.—G. W. BARNARD, D.D.S., Ware, Mass.



RELATION OF PYORRHEA TO JOINT INFECTION *

BY J. SPENCER DAVIS, M.D.,

Professor of Pediatrics and Orthopedics, Southern Methodist University Medical College.

On account of the general effects of pyorrhea, medical men have devoted a great deal of attention to this subject, and in the literature of the last few years numerous articles have appeared upon this subject.

This paper is presented for the purpose of arousing your interest in the systemic effects of this condition. There is a marked tendency to look upon pyorrhea as being of infectious origin or, in other words, as being due to bacterial infection, and the term alveolar osteomyelitis is now frequently used instead of pyorrhea.

There seems to be a close analogy between Pyorrhea and some joint conditions, and it may not be amiss to try and explain the cause of Pyorrhea along the same lines.

The dentist recognizes at least two varieties of pyorrhea, one accruing as a result of a deposit of tartar just underneath the gum margin, and the other as a result of a deposit occurring on the root of the tooth.

When this food undergoes decomposition by the bacteria of the mouth, the saliva becomes altered in its reaction. Tartar becomes precipitated from it and, finding the stagnant areas between the teeth and at the gingival margin a favorable location, it becomes deposited there. As soon as this deposit becomes large enough to cause pressure and injury to the soft tissues, the pus-producing organism finds a suitable soil upon which to grow, and a pyorrhea results.

From this focus of infection bacteria may make their way into the blood stream and become deposited in the joints, producing a true joint infection, or joint abscess. In such a case, microscopical examination of the pus drawn from the joint shows the same bacteria as that in the pus pocket of the gums.

At other times the bacteria remain localized in the gums, but the toxic material, produced by their life cycle, is absorbed into the blood and carried to the joint, where its irritating effect upon the bones

* Presented at Meeting of the Dallas District Dental Society, December, 1913.

causes spicules of bony formation around the articulation, resulting in great disability. In the later condition the bacteria are not found in the joint at all, but their life cycle produces a substance which has the power of causing this new deposit of bony material in the joint margins.



The cut illustrates how certain substances, which are formed in other parts of the body, have an affinity for joint structures. In this case it is urate of soda which is formed in general bodily metabolism.

From the bursa on the knee cap a solid cake of urate of soda, two inches in diameter and one inch thick, was removed.



The tooth and its socket form a true joint, and it is subjected to the same influences as other joints, inflammation of which may be pro-

duced by bacteria located in the various sinuses and cavities of the nose and throat.

From these deposits the bacteria may enter the blood stream and be carried to the joints or they may affect the joint by the products of their life cycle, as has been explained above.

We can explain the deposit occurring at the root of the tooth as being the result of a bacterial infection, just as the spicules which form around the joint are of bacterial origin. The bacteria producing this deposit at the root of the tooth may be in the pus pockets of the gum, or may be found in such places as the various cavities of the nose and throat.

When the deposit occurs as the result of bacteria located in other places than the gums, the organism found in the pus pockets is not the causative one, but is a secondary invader. The importance of recognizing this fact is illustrated by the case recited.

Since pyorrhea may be produced from so many different foci of infection, no one particular bacteria is always the causative factor.

The use of vaccines in the treatment of pyorrhea is now generally recommended, but at times vaccines fail to give good results.

We look upon all joint infection as always being secondary to deposit of bacteria in the body, and "rheumatism" no longer exists as a disease. That pyorrhea can produce the so-called "rheumatism" is now well recognized, and the aid of the dentist is frequently required to clear up this original focus.

I shall not burden you with a large number of case reports which would show the relation of pyorrhea to joint conditions, but will only illustrate, by a single case, how both pyorrhea and the joint involvement may arise from a focus elsewhere.

Mrs. _____. Family and personal history negative, except for a multiple joint inflammation of the hands and feet. In looking for a possible focus, it was noted that she had a pyorrhea, and she was referred to a dentist for treatment. Great improvement occurred in the pyorrhea, but almost no improvement in the joint condition. The dentist did excellent work, but after a time the pyorrhea seemed to be returning. She was referred to a nose and throat specialist, who found an accumulation in the left Antrum of Highmore. This was opened and drained, and not only the joints began to clear up, but the advance of the pyorrhea was checked. The patient first called our attention to the improvement in the pyorrhea, and since then there has been no further advance. The original condition in the gums is greatly improved, although it is not probable that all signs of the disease will disappear.—*The Texas Dental Journal*.

KEEPING RECORDS OF OPERATIONS

A great many members of the profession do not seem to realize the importance of keeping accurate records of the operations they perform. It is unbusinesslike, unscientific and wrong to ignore an obligation which is so self-evident as this. A man who does not keep records has no protection against imposition on the part of the patient when a claim is made that a given operation has failed. It is quite common for patients to return with the remark that "the filling you inserted a few weeks ago is out." And it is frequently the case that the patient is innocent of any wrong intent in the matter, even when the filling which failed may have been in many years and was inserted by some one else. It is difficult for people to always locate an operation precisely, and they naturally have in mind the last work that was done for them. Without records a dentist cannot convince his patient that it was not his operation which failed, even if indeed he can be sure of it himself. It is always a great satisfaction to a practitioner to be able to refer to his records when a patient returns after many years' absence, as it also is in the case of patients who have been coming periodically for a quarter of a century.

Then again the clinical value of records as it relates to the light they throw on the permanence or otherwise of certain operations is inestimable. We may, by referring to records, quickly learn those methods of practice which give us the best results and we may avoid the greatest sources of our failure. Viewed in this light records are exceedingly valuable.

But it is as evidence of another character in which records are even more important. It so happens that the dentist is operating upon those tissues which resist decomposition the longest of any in the physical economy. Dental operations, therefore, are the last to be destroyed when a body decomposes or is burned. In some of the great disasters where hundreds of human beings have lost their lives by fire, or other catastrophes which destroy the identity of the individual, it has been only by means of the records of dentists that identification has been established. This has occurred on several occasions, and it would be a sad commentary on the reputation for accuracy of any dentist who was appealed to for an examination of this kind and he was obliged to say that he did not keep records.

There is every argument in favor of keeping records and none against it.—*The Dental Review* (Editorial).

WHAT A LOT THESE PHYSICIANS KNOW ABOUT
DENTISTRY!

UNDOING THE DENTIST

The lower animals and unspoiled man know not the tooth brush, neither do they suffer much from dental caries. The calcium phosphate of the teeth is not dissolved by organic acids. The decomposition products of food are powerless to attack the teeth. The decay of teeth is internal in origin. Calomel internally, syphilis in the blood may decay the teeth, and the microscope demonstrates decay of a tooth to start first in the pulp, beneath the intact enamel.

Thus says Dr. James R. Mitchell in *The Dietetic and Hygienic Gazette*, March, 1913. And he claims decayed teeth go along with an acid stomach, the excess of HCl abstracting the calcium, and the blood, which *must* have one part of calcium in 10,000, failing to get it from the stomach, takes it from the tissues, the bones and *the teeth*. Too much sugar saps the lime from the blood, and the blood retaliates upon the teeth.

And there you are! The remedy? More lime, less starch and sugar. Demineralized grain products and our sugared but denatured "civilizationizing" of diet are ruining our teeth. Doubtless Dr. Aulde, with his "Chemic Problem in Nutrition," and Mr. McCann, in "Starving America," will agree with Dr. Mitchell.

At all events, if Dr. Mitchell *is* right, and he will make everybody believe he is, it will be the undoing of the dentist.—*The Medical Council.*

ST. LOUIS GETS ALASKA SEAL CATCH*

WORLD'S FUR CENTER NOW MOVES TO AMERICA

The United States Government, through Secretary of Commerce Redfield, has just made a decision that will make St. Louis the fur center of the world.

That is, to change the sale of all the Government catch of seal skins, foxes and other Alaska furs from London to St. Louis.

This is the first time in history that the American seal catch has been marketed through American channels, and the action of Secretary

* Information through courtesy of W. F. Saunders, Secretary and General Manager of the Business Men's League of St. Louis, Mo.

William C. Redfield is regarded by the commercial organizations and bureaus of commerce with great favor; particularly as being significant of the activity of the Wilson administration in paying close attention to all manufacturing and trade interests.

The United States thus will dispose of several thousand raw seal skins constituting the 1913 catch. And under the protecting laws favoring the increase of seals, the sale will increase many fold in the coming few years.

The next step will be the removal from London to St. Louis of seal skin tanners and dyers, establishing in America a great new manufacturing industry.

Thus will a trade of great proportions be fostered. But more than this, it will mean the elimination of the present heavy duty now paid on dressed and dyed skins prepared in Europe; while the skins will be dressed and dyed in America just as well, if not better, according to the statement of the best European dyers themselves.

The economy thus effected by this home industry and by the absence of the former heavy duty will eventually mean a saving of several hundred dollars a garment to milady in the purchase of the aristocrat of all furs.

SOME SEAL HISTORY

The history of the seal is one of the most absorbing and romantic of all the great American industries. While the U. S. Government has produced wonderfully interesting books on the subject, and which can be had free of charge, the whole country will be interested in a few facts bearing on the seal history of North America, especially in the light of the recent action of the Department of Commerce, which stamps St. Louis as the fur center of the world.

The price paid to Russia for the whole of Alaska was \$7,000,000. The revenue from the seal islands alone—rough, barren, forbidding spots that comprise but an infinitesimal area of the Alaska map—has been \$15,000,000, more than twice the sum paid for the entire territory.

This area comprises the Pribilof Islands, discovered in 1786 by the Russian navigator whose name the islands bear. It is the seat of the most important fur seal colony in the world. Next in importance is the Commander herd owned by Russia, while the Kuril herd owned by Japan comes third. During the first year of Uncle Sam's possession the catch was about 200,000 to 300,000 seals, but the herd has diminished so considerably that as a result laws have been enacted by which the herds will be conserved and future catches increased.

THE GREATEST EVIL

This great diminution of the herds has been the result of pelagic sealing—the killing of seals in the open sea. Whole fleets would sometimes lay off the seal islands while their crews killed the female seals which swam out to sea seeking food.

At sea the sexes cannot be distinguished, and the females predominating the pelagic catch is made up largely of this class, the percentage being from 85 to 95 per cent. of females. The death of a female seal was not the only evil. She was out seeking food for her pup which she had left on shore, so that her death meant also the death of the young one.

The United States, Russia, Japan and Great Britain have made a pact which stipulates that no longer shall the seal be killed on the high seas.

The books published by the U. S. Government on this interesting subject can be obtained free by writing the Department of Commerce, Bureau of Fisheries, and will afford enjoyable and instructive reading. Dealing as they do with the purchase of Alaska by the United States from Russia, and comprising a veritable natural history of the fur-bearing seal, as well as setting forth the economics of the sealing industry, these books cannot fail to be a source of real instruction to any good American citizen.

Editor DENTAL DIGEST:

IN the DIGEST for December I read "*AN OFFER*," from E. H. Stanley of Seattle, Wash. I wrote him and asked why he did not give his method to the profession and put it to use. I am in receipt of a card dated December 29th, saying my letter was at hand and would be filed away for answers at a later date. I am here giving you a copy of the card.

"Your letter received and filed for answer. I will not hint at method, for I worked ten years after I received my first hint before the details were worked out. I intend this matter to be presented to the profession in so positive a manner that it will not be smothered nor lost. I am _____ etc."

M. V. H.

THE PIED PIPER'S COUNT

THERE were 3,569,347 children between 14 and 16 in this country in 1910; 14,984,252 over 6 and under 14 years, and 12,666,762 under 6, and of these 2,217,342 were less than a year old. These are the children with whose lives and health the staff of the Children's Bureau, under Chief Julia C. Lathrop, has to deal. Its purpose, according to Miss Lathrop's report just published, is to "serve all children"—not as the Pied Piper of Hamelin served them, by leading them into the earth as a measure of retribution to their parents, but by bringing them up in the world of useful citizenship.

The Pied Piper counted last year 300,000 infants for a cold earth burial, Miss Lathrop says, of whom "at least half would now be living had we, as individuals and communities, applied those measures of hygiene and sanitation which are known and available." It is the limping and handicapped children to whom the bureau will give its first studies, as a means of preparing for its best services to all children, and its staff has begun with the problem of the preventable deaths of infants. Miss Lathrop's report quotes the words of Sir Arthur Newsome:

"Infant mortality is the most sensitive index we possess of social welfare. If babies were well born and well cared for, their mortality would be negligible. The infant death rate measures the intelligence, health, and right living of fathers and mothers, the standards of morals and sanitation of communities and governments, the efficiency of physicians, nurses, health officers, and educators."

The studies of the bureau will deal with a series of typical communities of small size, beginning with the city of Johnstown, Pa. Instead of studying infant mortality from the death records, the inquiry starts with the births and follows each child through the first year of his life and thereafter. The report of the first field inquiry will give a picture of the social, civic, and industrial conditions of 1,551 families of Johnstown, with the careful history of the nurture of every infant.

The small cities and rural communities have especial need of this work of inquiry. The great philanthropic societies and health boards of the larger cities have already considerably reduced the infant death rate in them. It is in the rural districts especially that young children die, and the mothers will not be comforted. It is the task of the Children's Bureau to point out the preventable conditions under which these youngest lives of the small communities are lost.—*New York Times*, February 12, 1914.

SOCIETY AND OTHER NOTES

CONNECTICUT.

The next meeting of the Connecticut State Dental Society will be held at Hartford, Conn., April 21-23, 1914. Headquarters, New Hotel Bond.—ARTHUR V. PRENTIS, New London, *Secretary*.

KENTUCKY.

The Kentucky State Dental Association will hold a four-days' post-graduate course at the Seelbach Hotel, in Louisville, March 9-12, 1914.—CHARLES R. SHACKLETTE, *Secretary*.

ILLINOIS.

The Illinois State Dental Society will hold its Golden Anniversary at La Salle Hotel, Chicago, March 23-26, 1914.—HENRY L. WHIPPLE, Wells Building, Quincy, *Secretary*.

MASSACHUSETTS.

The Fiftieth Annual Meeting of the Massachusetts Dental Society will be held in Boston, May 7-9, 1914, at Hotel Somerset.—F. O. KIDD, *Chairman*; A. R. BROWN, Boston, Mass.; A. W. DAY, Worcester, Mass., *Exhibit Committee*.

MICHIGAN.

The next meeting of the Michigan State Dental Society will be held in Detroit, Mich., at Hotel Teller, April 9-11, 1914.—F. WARD HOWLETT, Jackson, Mich., *Secretary*.

MISSOURI.

The next meeting of the Missouri State Dental Association will be held at St. Louis, April 21-23, 1914. Headquarters, Planters Hotel.

NEBRASKA.

The next meeting of the Nebraska State Dental Society will be held at Lincoln, Neb., May 19-21, 1914.—H. J. PORTER, *Secretary*.

NEW YORK.

The Forty-sixth Annual Meeting of the State of New York will be held at Albany, May 14-16, 1914. Clinics given at Hotel Ten Eyck; Literary programme rendered at New State Educational Bldg.; Dental Exhibits at hotel rooms.—A. P. BURGHART, *Secretary*.

OKLAHOMA.

The next meeting of the Oklahoma State Dental Society will be held at Lee-Huckins Hotel, Oklahoma City, March 30 to April 4, 1914.

PENNSYLVANIA.

The Fifty-first Annual Meeting of the Lake Erie Dental Association will be held May 21-23, 1914, at Hotel Bartlett, Cambridge Springs.—F. A. MEAD, Union City, Pa., *Secretary*.

TEXAS.

The Thirty-fourth Annual Meeting of the Texas State Dental Association will be held at Fort Worth, Texas, April 13-17, 1914.—J. G. FIFE, *Secretary*.

VERMONT.

The next meeting of the Vermont State Dental Society will be held at Rutland, Vt., May 21-23, 1914.—P. M. WILLIAMS, *Secretary*.

AMERICAN INSTITUTE OF DENTAL TEACHERS.

At the Annual Meeting of the Institute of Dental Pedagogica held at Buffalo, N. Y., January 27, 28, and 29, 1914, the name of the organization was changed to American Institute of Dental Teachers. The following officers were elected for the ensuing year: President, Fred W. Gethro, Chicago, Ill.; Vice-President, H. M. Seamans, Columbus, Ohio; Secretary-Treasurer, John F. Biddle, 517 Arch Street, N. S., Pittsburgh, Pa.; Executive Board, Shirley W. Bowles, Washington, D. C.; A. W. Thornton, Montreal, Can.; R. W. Bunting, Ann Arbor, Mich.

COMPLIMENTARY DINNER TO PROF. FANEUIL D. WEISSE.

A complimentary dinner to Faneuil D. Weisse, M.D., will be tendered by his friends in the medical and dental professions, to commemorate his completion of fifty years as practitioner and teacher, at the Hotel Astor, 45th Street and Broadway, Saturday evening, March 28, 1914, at 7 o'clock.

Those desiring to attend will kindly communicate with the Secretary at as early a date as possible.

COMMITTEE—W. W. Walker, Chairman, 58 West 50th Street, New York City; H. S. Dunning, Secretary, 17 East 38th Street, New York City; J. W. Taylor, Treasurer, 106 East 57th Street, New York City; H. W. Gillett, A. R. Starr, A. L. Swift, R. Ottolengui, W. B. Dunning, E. Hillyer, H. P. Gould, G. B. Palmer, F. W. Van Saun.

PATENTS

- 1,072,432, Dental appliance, E. M. Crane, Detroit, Mich.
- 1,072,517, Crown pin extractor, F. H. Skinner, Chicago, Ill.
- 1,072,518, Dental instrument, F. H. Skinner, Chicago, Ill.
- 1,072,519, Dental appliance, F. H. Skinner, Chicago, Ill.
- 1,072,520, Double-acting pin puller, F. H. Skinner, Chicago, Ill.
- 1,072,521, Pin puller, F. H. Skinner, Chicago, Ill.
- 1,073,693, Handle for dental impression trays, etc., L. E. Eaton, Sturgis, S. D.
- 1,073,695, Attachment for dental pluggers, F. C. Lambert, New York, N. Y.
- 1,073,725, Tooth powder, R. Yeganian, Yonkers, N. Y.
- 1,074,345, Artificial denture, E. C. Bennett, New York, N. Y.
- 1,074,169, Antiseptic tooth brush receptacle, E. Fowler, Seattle, Wash.
- 13,621 (Reissue), Dental instrument, J. L. Kelly, Chicago, Ill.
- 1,069,666, Holder and deliverer for toothpicks and matches, C. M. Bartholomew, Columbus, Ohio.
- 1,070,106, Ingot mold, W. R. Bossinger, Marion, Ohio.
- 1,069,680, Tooth, H. E. Dowell, Newport, Ark.
- 1,070,123, Dental instrument, W. W. Evans, Hamilton, Va.
- 1,069,874, Dental tape or floss, F. Z. Hanscom, Chicago, Ill.
- 1,079,132, Producing backings for artificial teeth, G. Holtz, Gouldsboro, Pa.
- 1,070,188, Wrist joint for dental engines, A. W. Schramm, Riverton, N. J.
- 1,070,219, Artificial tooth, A. W. Wimmer, Chicago, Ill.
- 1,069,616, Dental vulcanizer, A. C. Hulbert, Santa Rosa, Cal.
- 1,070,785, Artificial tooth, T. E. Dimelow, Philadelphia, Pa.
- 1,070,442, Artificial teeth, E. Fogg, Newcastle-upon-Tyne, England.

1,070,494, Detachable tooth facing for bridge and plate work, W. C. Lampe, Pittsburgh, Pa.

1,070,500, Dental casting apparatus, D. S. Mackenzie, Levin, New Zealand.

1,070,905, Dental plate waxer, V. McRae, Minneapolis, Minn.

1,070,858, Tooth-brush holder and sterilizer, J. H. Trayne, Groton, Mass.

1,072,399, Sanitary toothpick dispenser, C. D. Lyon, St. Louis, Mo.

1,072,357, Dental device, C. J. Palmer, Appleton, Wis.

1,071,952, Artificial tooth, L. Perzin, Philadelphia, Pa.

1,071,966, Tooth-brush holder, H. W. Sorensen, U. S. Navy.

1,071,019, Artificial denture, C. P. Balger, Cincinnati, Ohio.

1,071,395, Dental engine, W. E. Clayton, Los Angeles, Cal.

1,071,228, Mandrel for dental disks, P. Gross, Dusseldorf, Germany.

1,071,175, Flask, W. C. Poppe, Chicago, Ill.

1,071,103, Dental instrument, F. H. Skinner, Chicago, Ill.

Copies of above patents may be secured for fifteen cents each, by addressing John A. Saul, Solicitor of Patents, Fendall Building, Washington, D. C.

FUTURE EVENTS

March 9-12, 1914—Kentucky State Dental Association Meeting, held in Seelbach Hotel, Louisville.—CHARLES R. SHACKLETTE, *Secretary*.

March 10th, 1914—The eleventh annual clinic and dental exhibit of the Fox River Valley Dental Society, Green Bay, Wis.—J. L. BLISH, Fond du Lac, Wis., *Secretary*.

March 17-20, 1914—Dental Manufacturers' Club Exhibit, Monongahela House, Pittsburgh, Pa.

March 23-26, 1914—Illinois State Dental Society, Golden Anniversary, La Salle Hotel, Chicago.—HENRY L. WHIPPLE, Wells Bldg., Quincy, *Secretary*.

March 30-April 4, 1914—Oklahoma State Dental Association, held at Lee-Huckins Hotel, Oklahoma City. Drs. Jos. B. Eby and Thos. P. Hinman, of Atlanta, Ga., lecturers.

April 9-11, 1914—Michigan State Dental Society, Hotel Teller, Detroit, Mich.—F. WARD HOWLETT, Jackson, Mich., *Secretary*.

April 13-17, 1914—Texas—The Thirty-fourth Annual Meeting of the Texas State Dental Association, Fort Worth, Texas.—J. G. FIFE, *Secretary*.

April 21-23, 1914—Missouri State Dental Association Meeting, St. Louis. Headquarters, Planters Hotel, St. Louis.

April 21-23, 1914—Connecticut State Dental Society Meeting, Hartford.—ARTHUR V. PRENTIS, New London, *Secretary*.

May, 1914—Washington State Dental Examination Board.—R. L. MOAK, Montesano, *Secretary*.

May 7-9, 1914—Massachusetts Dental Society Meeting, Hotel Somerset, Commonwealth Avenue, Boston.—F. O. KIDD, Fall River, Mass., *Chairman*.

May 14-16, 1914—Forty-sixth Annual Meeting of State of New York, at Albany, N. Y. Literary program at Educational Hall; clinics and exhibits, Ten Eyck Hotel.—A. P. BURKHART, *Secretary*.

May 19-21, 1914—Indiana State Dental Association Meeting, Indianapolis, Ind., held in German House.—OTTO U. KING, *Secretary*.

May 19-21, 1914—Nebraska State Dental Society, Lincoln, Neb.—H. J. PORTER, Cambridge, Neb., *Secretary*.

May 20-22, 1914—Vermont State Dental Society Meetings, held at Shrine Temple, Rutland, Vt.—P. M. WILLIAMS, Rutland, Vt., *Secretary*; H. M. SMITH, Lyndonville, Vt., *Chairman*.

May 21-23, 1914—Vermont State Dental Society, Rutland, Vt.—P. M. WILLIAMS, Rutland, Vt., *Secretary*.

May 26-28, 1914—Susquehanna Dental Association, at Water Gap House, Delaware Water Gap, Pa.

May 26-29, 1914—Canada—Canadian Dental Association, first meeting, Winnipeg.—WM. H. GARVIN, *Secretary*.

June 4-6, 1914—Tennessee State Dental Association, Chattanooga, Tenn.—C. O. RHEA, 625½ Church Street, Nashville, Tenn., *Secretary*.

June 8-10, 1914—Missouri State Board of Dental Examiners, Jefferson City.—GEORGE E. HAIGH, *Secretary*.

June 12, 1914—South Carolina State Board of Dental Examiners, Chick Springs, South Carolina.—R. L. SPENCER, *Secretary*.

June 17-19, 1914—New Hampshire State Dental Society, Annual Meeting, New Hotel Weirs, Weirs, N. H.—L. I. MOULTON, *Secretary*.

June 17-19, 1914—South Carolina State Dental Association, Chick Springs Hotel, Chick Springs. Clinic in charge of J. Murray Hair, Greenville, S. C.—WM. B. SIMMONS, *Secretary*.

June 19-20, 1914—Utah State Dental Society, Logan, Utah.—J. P. STEWART, First National Bank Building, Logan, Utah.—*Secretary*.

June 22, 1914—Wisconsin State Board of Dental Examiners will convene at Marquette University, Milwaukee, Wis.—W. T. HARDY, *Secretary*.

June 23-25 1914—Mississippi Dental Association, Vicksburg, Miss.—M. B. VARNADO, Oskyka, Miss., *Secretary*.

June 25-27, 1914—Colorado State Dental Association, Manitou, Colorado.—EARL W. SPENCER, Pueblo, Colo., *Secretary*.

June 24-27, 1914—North Carolina Dental Society, Hendersonville, N. C.—J. MARTIN FLEMING, Raleigh, N. C., *Secretary*.

June 30-July 1-2 1914—Pennsylvania State Dental Society, Bellevue-Stratford Hotel, Philadelphia, Pa.—LUTHER M. WEAVER, Philadelphia, Pa., *Secretary*.

July 7-10, 1914—New York—National Dental Association Meeting, Rochester.—HOMER C. BROWN, *President*; OTTO U. KING, Huntington, Ind., *Secretary*.

July 14-16, 1914—Wisconsin State Dental Society, Fond-du-Lac, Wis.—O. G. KRAUSE, Wells Building, Milwaukee, Wis. *Secretary*.

July 15-18, 1914—New Jersey State Dental Association Meeting, held in North End Hotel, Ocean Grove, N. J.—JOHN C. FORSYTH, *Secretary*.

August 3-8, 1914—England—Sixth International Dental Congress, London.

August 6-8, 1914—Minnesota State Dental Association Meeting, Duluth.—BENJAMIN SANDY, Syndicate Building, Minneapolis, *Secretary*.

August 12-14, 1914—West Virginia State Dental Society, Huntington, W. Va.—A. C. PLANT, 802 Schmulbach Building, Wheeling, W. Va., *Secretary*.

January 28-30, 1915—Annual Meeting of American Institute Dental Teachers, Ann Arbor, Mich.—J. F. BIDDLE, Ann Arbor, Mich., *Secretary*.

August 30-Sept. 1-9 1915—Panama-Pacific Dental Congress, San Francisco, Cal.